



PROPOSAL DOCUMENTS

**PARKING ACCESS & REVENUE CONTROL SYSTEM REPLACEMENT
AT
NEW HAVEN PARKING AUTHORITY FACILITIES
NEW HAVEN, CONNECTICUT
NHPA PROJECT #24-029**

AUGUST 2025



**PARKING ACCESS & REVENUE CONTROL SYSTEM REPLACEMENT
AT
NEW HAVEN PARKING AUTHORITY FACILITIES
NEW HAVEN, CONNECTICUT
NHPA PROJECT #24-029**

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Not Applicable

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Not Applicable

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Not Applicable

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Not Applicable

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Not Applicable

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Not Applicable

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Not Applicable

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Not Applicable

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INVITATION FOR PROPOSALS

INVITATION FOR PROPOSALS

PARKING ACCESS & REVENUE CONTROL SYSTEM REPLACEMENT AT NEW HAVEN PARKING AUTHORITY FACILITIES NEW HAVEN, CONNECTICUT NHPA PROJECT #24-029

The New Haven Parking Authority (“NHPA”), a special purpose municipal authority, created by Special Act 51-473 of the General Assembly of the State of Connecticut, as amended, with a mailing address of 232 George Street, New Haven, CT 06510, hereby issues this Invitation for Proposals for Parking Access & Revenue Control System Replacement at its Facilities. NHPA will receive sealed proposals until **3:00 p.m.** EDT time on **September 30, 2025** (“Submission Deadline”) in accordance with the *Instructions to Proposers*. **Any Proposal received after the Submission Deadline will be rejected.** NHPA shall decide when the specified time has arrived as a deadline to receive Proposals, and no Proposal received thereafter will be considered.

The Proposal Documents will be available beginning **September 02, 2025** at no cost by downloading from the New Haven Parking Authority / Park New Haven website at <https://parknewhaven.com/request-for-bids/>.

The work for this project includes, but is not limited to: removal of existing equipment and installation of a new state-of-the-art Parking Access and Revenue Control System, refurbishment of designated booths inclusive of painting, metal repair, roofing and related finishes, installation of new HVAC and lighting with associated ductwork repairs and replacement, design and install integratable security cameras and door control system for all Garage pedestrian entrances, miscellaneous coordination, together with all incidental work thereto and in accordance with the Proposal Documents, as well as preventative maintenance and repair services at the New Haven Parking Authority facilities involving 7 parking garages and 8 surface lots.

The New Haven Parking Authority reserves the right to reject any or all proposals, to waive any informalities in the proposals and to further negotiate with proposers.

The New Haven Parking Authority is an Equal Opportunity/Affirmative Action Employer.

NEW HAVEN PARKING AUTHORITY

Douglas Hausladen, Executive Director

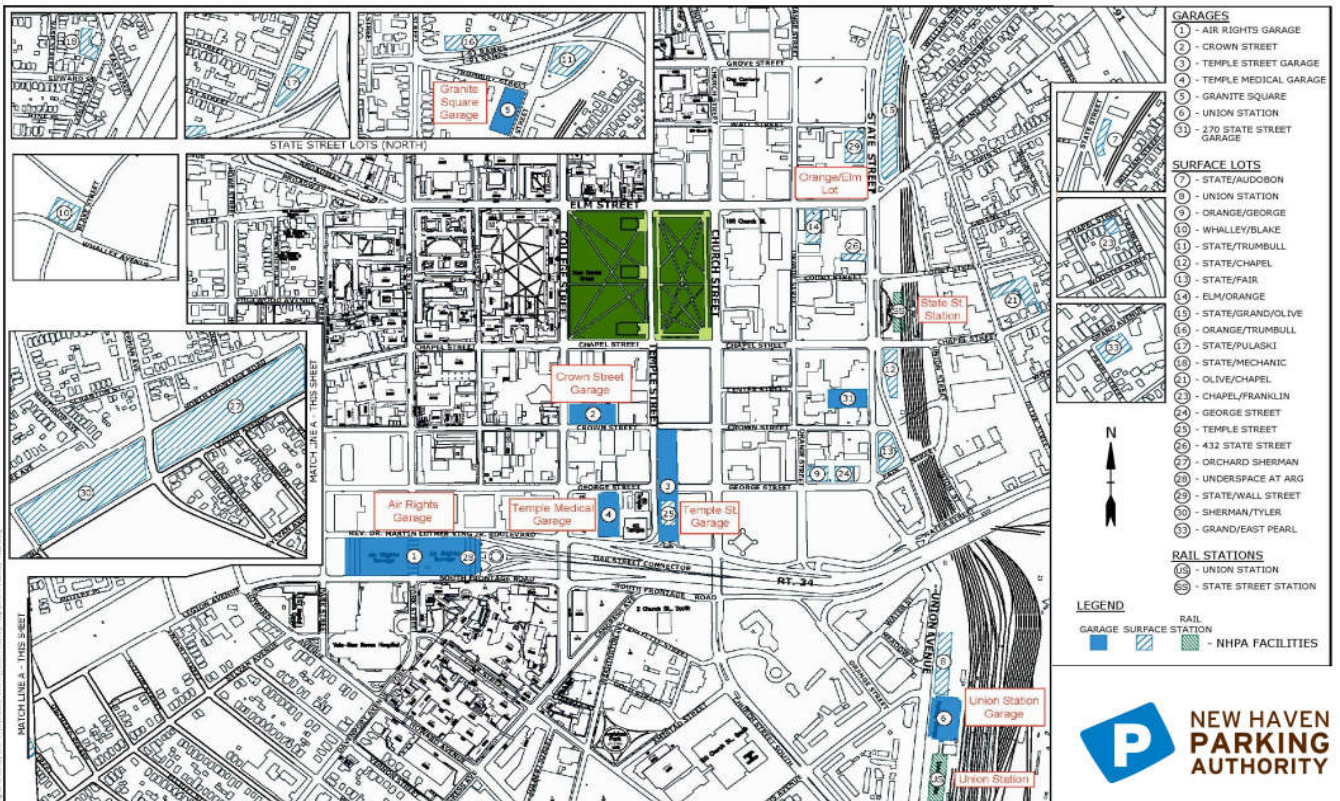
SITE PLAN

PARKING ACCESS AND REVENUE CONTROL SYSTEM REPLACEMENT

AT NEW HAVEN PARKING AUTHORITY FACILITIES, NEW HAVEN, CONNECTICUT

NHPA PROJECT #24-029

Facility Name	PARCS Installation	No. of Booth Modernization (#)	No. of Booth Replacement (#)	Note
Air Rights Garage	✓	3		
Crown Street Garage	✓	3		
Granite Square Garage	✓	1		
Temple Medical Garage	✓	1		
Temple Street Garage	✓	3		
Union Station Garage	✓	2		
270 State Street Garage	✓			
Elm/Orange Lot	✓			
State/Wall Lot	✓			
State/Chapel Lot	✓			
State/Fair Lot	✓			
State/Trumbull Lot	✓			
State/Pulaski Lot	✓			
Whalley/Blake Lot	✓			
Under ARG Lot	✓		1	



DESCRIPTION OF SERVICES REQUESTED
PARKING ACCESS AND REVENUE CONTROL SYSTEM REPLACEMENT
NEW HAVEN PARKING AUTHORITY FACILITIES

The New Haven Parking Authority (NHPA) hereby solicits proposals from qualified vendors for the design, implementation, and integration of a state-of-the-art Parking Access and Revenue Control System (PARCS) to supersede the existing infrastructure. This request also encompasses the replacement and modernization of associated parking booths, as well as designing and installing security cameras and a door control system for all Garage pedestrian entrances that integrates with the new PARCS system. The facilities that will be receiving the new PARCS are Air Rights Garage, Crown Street Garage, Granite Square Garage, Temple Medical Garage, Temple Street Garage, Union Station Garage, 270 State Street Garage, Elm/Orange Lot, State/Wall Lot, State/Chapel Lot, State/Fair Lot, State/Trumbull Lot, State/Pulaski Lot, Whalley/Blake Lot, and the Under Air Rights surface parking lot. The parking facilities at Air Rights Garage, Crown Street Garage, Temple Medical Garage, Temple Street Garage, Union Station Garage, and Granite Square Garage will undergo booth(s) modernization, while Under Air Rights will have its booth replaced entirely. Refer to Site Plan on Exhibit "0.1." Exhibit "0.2" outlines the parking facilities scheduled for PARCS implementation and booth upgrades or replacement. For a summary on the PARCS equipment deployment plan, please refer to Exhibit "0.3". Refer to Proposal Documents of this proposal concerning separate construction documents for the modernization, repairs and improvements. **NOTE:** Granite Square Garage is a leased facility from Daymarr Realty, and NHPA is Operator. Union Station Transportation Center (both the Building and Garage) is a leased facility from the State of Connecticut Department of Transportation (CTDOT) to the City of New Haven, and NHPA serves as Manager.

The chosen service provider for the PARCS replacement project will be tasked with delivering comprehensive round-the-clock servicing, repair, and maintenance of the NHPA's PARCS equipment and software. This includes providing all necessary labor, materials, equipment, and supervision to replace the existing system while ensuring full operational capability upon completion. The new PARCS must meet or exceed current industry standards and integrate seamlessly with existing infrastructure. The Contractor will be responsible for obtaining required permits, adhering to all applicable codes and regulations, and submitting detailed project documentation for approval. Installation and testing must comply with established safety, environmental, and operational benchmarks. The provider will also deliver comprehensive staff training and ongoing warranty and maintenance support. Adherence to NHPA's Terms and Conditions is mandatory, including any special requirements for work in historic areas. The Contractor shall designate a dedicated project manager to oversee the seamless, effective, and efficient deployment of the new PARCS system.

The New Haven Parking Authority will tentatively enter into a ten-year contract renewable annually at NHPA's discretion. The New Haven Parking Authority will also include a cancellation-for-convenience clause in the proposed service agreement. The New Haven Parking Authority reserves the right to contract with other entities for similar services, and may award separate contracts to separate proposers.

The successful Proposer shall be required to carry insurance as stipulated in the Proposal Documents for services performed for the New Haven Parking Authority. The successful proposer shall provide and maintain a certificate of insurance and shall name the New Haven Parking Authority, the City of New Haven, the State of Connecticut and their respective officers,

employees and agents as additional insured, related to services provided; the New Haven Parking Authority reserves the right to add entities to this list of additional insured. This insurance policy shall remain in full force and effect from the date of the service agreement through seven years after the date of completion of service or through the expiration of the statute of limitations, whichever is sooner.

Funding for these services may partially be provided by an agreement with the State of Connecticut, Department of Transportation. The successful proposer shall be required to abide by the requirements of State, as per enclosed Exhibits "A" and "A-1", as applicable.

A draft Service Agreement is provided within these Proposal Documents.

EXHIBIT "0.1"

SITE MAP

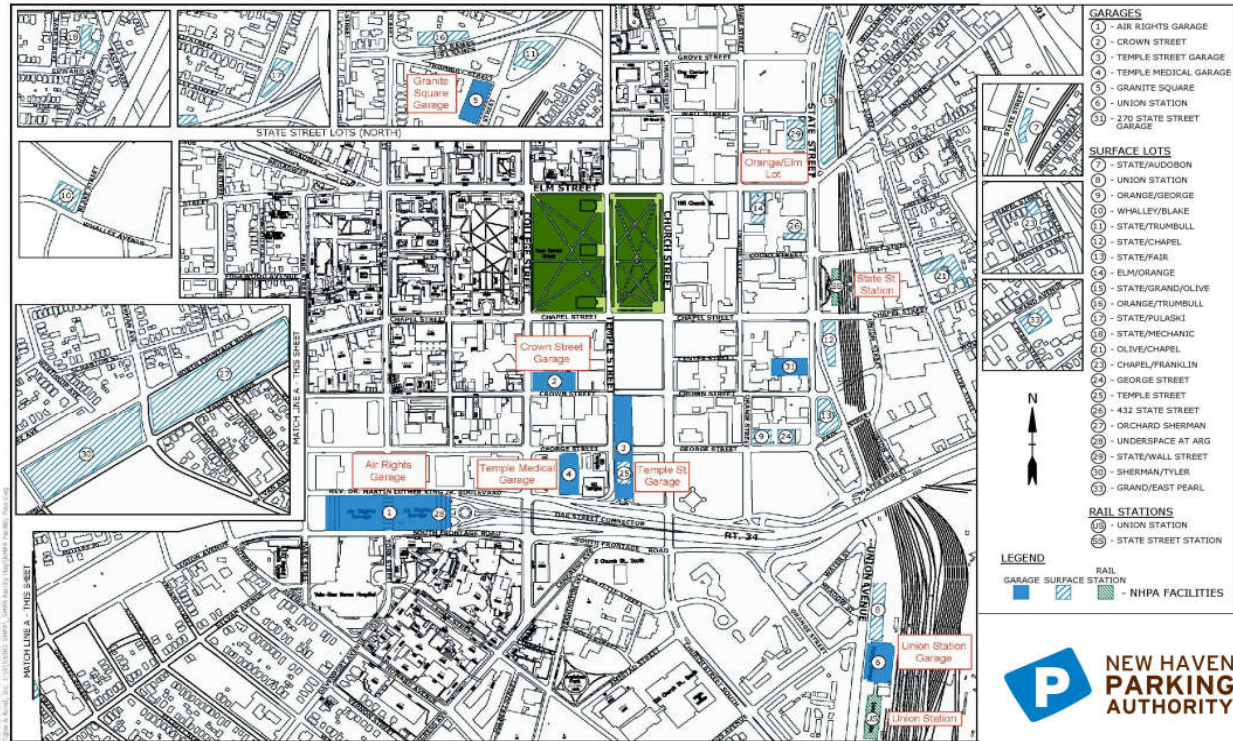


EXHIBIT “0.2”

Facility PARCS Implementation and Booths Improvement/Replacement

Facility Name	PARCS Installation	No. of Booth Modernization (#)	No. of Booth Replacement (#)	Note
Air Rights Garage	✓	3		
Crown Street Garage	✓	3		
Granite Square Garage	✓	1		
Temple Medical Garage	✓	1		
Temple Street Garage	✓	3		
Union Station Garage	✓	2		
270 State Street Garage	✓			
Elm/Orange Lot	✓			
State/Wall Lot	✓			
State/Chapel Lot	✓			
State/Fair Lot	✓			
State/Trumbull Lot	✓			
State/Pulaski Lot	✓			
Whalley/Blake Lot	✓			
Under ARG Lot	✓		1	

EXHIBIT “0.3”

PARCS Project: Equipment Deployment Plan at a Glance

Garages

LOC #	NEW HAVEN PARKING AUTHORITY PARCS EQUIPMENT INSTALLATION MATRIX	Gate	Lanes (Future Gates)	ACS Reader (Entry)	Ticket Dispenser	Intercom	Barcode Reader	Credit Card Entry	Garage Door Controller	High Speed Garage Door	Sign (FULL)	ACS Reader (Exit)	Paid Ticket	Pay In Lane	Cashier Equip.	Fee Display	Detector Free Exit	Overhead signs	Automated Payment Machine
AIR RIGHTS GARAGE																			
A1	Entry Lane -	1		1	1	1													
A2	Entry Lane -	1		1	1	1								1					
A3	Entry Lane - level 4, 6, 8	3		3		3					3								
B1	Reversible Lane - (Booth)	2		1	1	2						1	1	1	1	1		1	
B2	Reversible Lane - (Booth)	2		1	1	2						1	1	1	1	1		1	
C1	Exit (Booth)	1										1	1	1	1	1		1	
C2	Exit (Booth)	1										1	1	1	1	1		1	
C3	Exit Lane - level 4, 6, 8	3															3		
D	Reversible	2		1	1	1						1	1	1					
E	Entry / Exit	2		1		1											1		
F	Entry	1		1		1	1												
H	Public																		4
G	Exit	1				1											1		
CROWN STREET GARAGE																			
A1	Entry	1		1	1	1													
A2	Exit (Existing Booth)	1				1						1	1	1	1	1			
B1	Entry (Existing Booth)	1		1		1									1	1			
B2	Entry (Existing Booth)	1		1		1									1	1			
C1	Exit (Existing Booth)	1				1						1	1	1	1	1			
C2	Exit (Existing Booth)	1				1						1	1	1	1	1			
C3	Entry	1		1	1	1													
C4	Entry	1		1	1	1													
GRANITE SQUARE GARAGE																			
A1	Entry	1		1		1													
A2	Exit	1				1							1						
B1	Entry	1		1		1			1										
B2	Exit	1				1			1				1						
C	Public																		2
D1	Entry		1	1	1	1													
D2	Exit		1			1						1		1					
TEMPLE MEDICAL GARAGE																			
A1	Exit (Existing Booth)	1							1	1		1		1	1	1	1		
A2	Entry	1		1	1	1			1	1									
B1	Entry	1		1	1	1			1	1									
B2	Exit (Existing Booth)	1							1	1		1		1	1	1	1		
TEMPLE STREET GARAGE																			
A1	Exit (Existing Booth)	1										1		1	1	1			
A2	Exit (Existing Booth)	1										1		1	1	1			
B1	Reversible (Existing Booth)	2		1	1	1						1		1	1	1			
B2	Entry	1		1	1	1								1	1	1			
C	Entry	1		1	1	1													
D	Reversible (Existing Booth)	2		1	1	1						1		1	1	1			
E	Entry	1		1	1	1													
UNION STATION GARAGE																			
A1	Reversible (New Booth)	2		1		1	1	1	1	1	1								
A2	Exit (Shared Booth)	1				1	1	1	1	1	1								
B1	Entry (New Booth)	1		1		1		1	1	1	1								
B2	Exit (Shared booth)	1				1		1	1	1	1								
270 STATE STREET GARAGE																			
A1	Entry	1		1		1	1	1			1								
A2	Exit (Shared Booth)	1				1	1				1								
TOTAL PARCS COMPONENT UNITS - ALL GARAGES		52	2	28	16	40	5	5	10	8	9	15	10	17	16	16	7	4	6

[illegible]

INSTRUCTIONS TO PROPOSERS

INSTRUCTIONS TO PROPOSERS

PARKING ACCESS & REVENUE CONTROL SYSTEM REPLACEMENT AT NEW HAVEN PARKING AUTHORITY FACILITIES NEW HAVEN, CONNECTICUT NHPA PROJECT #24-029

The New Haven Parking Authority (“NHPA” or the “Authority”), hereby provides these Instructions to Proposers for Parking Access & Revenue Control System Replacement at NHPA Facilities, NHPA Project #24-029.

1. USE OF SEPARATE PROPOSAL FORMS

The Proposal Documents include a complete set of the Proposal Forms to be filled out and submitted to the NHPA.

2. INTERPRETATIONS AND ADDENDA

No oral interpretation will be made to any Proposer as to the meaning of the Proposal Documents or any part thereof. Every request for an interpretation of the Proposal Documents shall be made in writing to the Director of Revenue Control, New Haven Parking Authority, via e-mail at imoneke@nhparking.com with a copy to the NHPA counsel pokragly@cohenandwolf.com. Any inquiries must be received no later than Noon on **September 19, 2025** to be given consideration. Every interpretation made to a Proposer will be in the form of an Addendum to the Proposal Documents and, when issued, will be also available on the New Haven Parking Authority website at <https://parknewhaven.com/request-for-Bids/> at least 24 hours before Proposals are opened. **It shall be the Proposer’s responsibility to make inquiry as to, and to obtain, any Addenda issued, if any. Proposers should monitor the Website for any issuance of Addenda.** All such Addenda shall become part of the Proposal Documents and each Proposer shall be bound by such Addenda.

NOTE: In the space provided on the Proposal Form, Proposers shall list each addendum by number which they received. Proposers who do not list all addenda issued by NHPA for this Proposal may be considered non-responsive to this Proposal and their Proposal may be rejected.

3. INSPECTION OF FACILITIES

Prior to the Proposal submission, each Proposer shall visit the New Haven Parking Authority Facilities involved with this Proposal (refer to Site Plan) and become fully acquainted with the existing conditions there relating to the proposed services, the facilities involved and the

difficulties and restrictions attending the performance of the proposed services. The Proposer shall in no way be relieved of any obligation to visit the facilities involved and become acquainted with the conditions there existing and the difficulties and restrictions attending the performance of the proposed services, and the New Haven Parking Authority will reject any claim based on facts regarding which the Proposer should have been on notice. All personnel visiting the sites shall notify Ijeoma J. Moneke (IJ), Director of Revenue Control, sufficiently ahead of time at 203-410-7475 (office) or email at imoneke@nhparking.com to make an appointment. NOTE: The train platforms and track areas are under the jurisdiction of MTA/Metro-North. **No personnel are allowed on the train platforms or track areas.**

4. PROPOSALS

- A. Each Proposal must be submitted utilizing the appropriate and applicable Proposal Forms. All blank spaces within the Proposal Forms must be filled in. No changes shall be made to the Forms. Erasures and other changes in the Proposal must be explained or noted over the signature of the Proposer.
- B. Each Proposer shall sign the Proposal in the blank space provided for this purpose. If a Proposal is made by a business entity, the name and address of such entity shall be indicated, together with the names and addresses of the applicable officers, directors, members, etc. If the Proposal is made by a partnership, it must be acknowledged by one of its partners; if made by a limited liability company, corporation, or other similar entity, it must be acknowledged by one of its members, officers, or similar duly authorized agents.
- C. Proposers shall submit all of the following completed documents to NHPA, which collectively shall constitute a "Proposal":
 - 1. Proposal Form
 - 2. Proposal Bond and Form of Surety Guaranty
 - 3. Non-Collusion Affidavit of Proposer
 - 4. Statement of Proposer's Qualifications
 - 5. Statement of Items to be Discussed by the Proposer
 - 6. Equal Employment Opportunity Agreement
 - 7. Current Work Force Certificate
 - 8. Community Subcontractor Utilization Certificate
 - 9. Certificate of Non-Arrearage
 - 10. Contractors Wage Certificate Form
 - 11. Preliminary Project Progress Schedule
 - 12. Hourly Rate Schedule
- D. Each Proposal shall be submitted, via email, by attaching one or more PDF files, to: Ijeoma J. Moneke (IJ), Director of Revenue Control, at imoneke@nhpsarking.com and pokragly@cohenandwolf.com (Peter Okragly of Cohen and Wolf, P.C., counsel to the New Haven Parking Authority). Emails shall contain the subject line **"Proposal for Parking Access & Revenue Control System Replacement at NHPA Facilities, NHPA Project"**

#24-029.” NHPA shall decide when the specified time has arrived as a deadline to receive Proposals, and no Proposal received thereafter will be considered.

- E. Each Proposer is specifically advised that any person, firm, or any other party to whom it proposes to award a subcontract in the event of an Award, may be required to submit a certification regarding Equal Employment Opportunity, similar to that submitted by the Proposer. Subcontractors are subject to the approval of NHPA.
- F. NHPA may, at its option, waive any informality or accept or reject or negotiate any and all Proposals. Any Proposal received after the time, date and place specified shall not be considered; provided, however, NHPA, in its sole discretion, reserves the right to delay the opening of the Proposals.

5. PROPOSER'S PRICE ITEMIZATION

The Proposer is required to price the various components of the work as set forth in the Proposal Form. The prices submitted for each of the several items in the Proposal Form shall include its pro rata share of overhead and profit. The sum of all items in the Proposal Form shall equal the total amount of the Proposal (the “Proposal Price”). Any Proposal not conforming to this requirement may be rejected as informal. The special attention of all Proposers is called to this provision: Should conditions make it necessary to revise the scope of the Project and/or revise estimated quantities (if applicable), the Unit Prices and Lump Sums for each component listed in the Proposal Form shall serve as the basis for adjustments to the Proposal Price.

6. PROPOSAL GUARANTY

In the event the Proposal Price is \$50,000 or more, the proposer must be accompanied by a proposal guaranty, which shall not be less than ten percent (10%) of the amount of the proposal. The guaranty shall be a proposal bond in the form attached. The proposal bond shall be secured by a guaranty or surety company authorized and qualified to do business in the State of Connecticut and listed in the latest issue of U.S. Treasury Circular 570. The amount of such proposal bond shall be within the maximum amount specified for such in said Circular 570. Proposals will be considered non-responsive unless accompanied by the required guaranty. The proposal guaranty shall insure the execution of the Agreement and the furnishing of the surety bond or bonds by the successful Proposer, all as required by the Proposal Documents.

7. COLLUSIVE AGREEMENTS PROHIBITED

Each Proposal shall have an affidavit attached thereto, in the form herein provided, that affirms that the Proposer has not colluded with any person, firm, entity, or any other third party in regard to the Proposal submitted.

Before executing any subcontract, the selected Proposer shall submit the name of any proposed subcontractor for prior approval and an affidavit from the subcontractor in the form to be provided by NHPA.

8. STATEMENT OF PROPOSER'S QUALIFICATIONS

Each Proposer shall submit the *Statement of the Proposer's Qualifications Form*. The Proposer shall include a statement of the Proposer's qualifications, its experience record in constructing and servicing the type of improvements embraced in the Agreement, and its organization and equipment available to complete the work contemplated; and, when specifically requested by NHPA, each Proposer shall also submit a detailed financial statement. The Proposals will be evaluated in part by the nature and extent of the service to be provided and by Proposer's qualifications and experience as outlined in the *Statement of Proposer's Qualifications Form*.

Each Proposer shall submit on the form furnished for that purpose (a copy of which is included in the Proposal Documents)

Proposers shall also attach the following as part of their response:

- (a) supplemental materials including copies of licenses and training certificates as applicable;
- (b) the required DAS prequalification certificates from the Proposer **if the contract value is in excess of \$1,000,000**, per Connecticut General Statutes § 4b-91, as well as from all "Substantial Subcontractors" (which, as defined in Connecticut General Statutes § 4a-100, means a **subcontract with a subcontract value in excess of \$1,000,000**); and
- (c) DAS certificates for all SBEs and MBEs (i.e., MBE/WBE/DisBEs) to be utilized on the project, as defined in Connecticut General Statutes § 4a-60g.

NHPA shall have the right to take such steps as it deems necessary to determine the ability of the Proposer to perform its obligations under the Agreement and upon request of NHPA the Proposer shall provide all such information and data for this purpose. The right is reserved to reject any proposal where an investigation of the available evidence or information does not satisfy NHPA that the Proposer is qualified to properly carry out the terms of the Agreement.

9. STATEMENT OF ITEMS TO BE DISCUSSED BY THE PROPOSER

Each Proposer shall submit the *Statement of the Items to be Discussed Form*. The Proposals will be evaluated in part by the nature and extent of details provided by Proposer as outlined in the *Statement of the Items to be Discussed Form*.

10. WAGES AND SALARIES

- a. As per Connecticut General Statutes § 31-53, municipal grantees shall pay prevailing wages rates on a Public Works Contract. Under current law, the state or political subdivision must

award the construction contract and be a party to the construction contract and not a mere grantor of funds for the project to require prevailing wage rates.

b. The provisions of Connecticut General Statutes § 31-53 do not apply when the total project cost of all work to be performed by all contractors and subcontractors in connection with new construction of any public works project is less than \$1,000,000 or where the total cost of all work to be performed by all contractors and subcontractors in connection with any remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project is less than \$100,000.

Please refer to https://portal.ct.gov/dol/divisions/wage-and-workplace-standards/prevailing-wage?language=en_US for further guidance.

c. When Prevailing Wage Rates are required, the construction contract shall contain the following provision:

“The wages paid on an hourly basis to any person performing the work of any mechanic, laborer or worker on the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (i) of section 31-53, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair project is being undertaken. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person’s wages the amount of payment or contribution for such person’s classification on each pay day.”

d. The State Department of Labor’s Wage and Workplace Standards Division (860-754-5186 or at matthew.ferri@ct.gov) will assist in determining the prevailing wage rate.

11. PRELIMINARY PROJECT PROGRESS SCHEDULE

The Proposer shall submit with its Proposal a Preliminary Progress Schedule (use enclosed form), showing the proposed dates of starting and completing each of the various sections of the work.

12. HOURLY RATE SCHEDULE

The Proposer shall submit with its Proposal an Hourly Rate Schedule (use enclosed form) for all tradesmen associated with this Proposal package for performing extra work on a time and material basis. These rates are to be fully loaded [including benefits, taxes (all Sales Taxes, Labor and Material as applicable for this project and type of work), applicable insurance, overhead and profit, bond costs (if Subcontractor has provided Surety Bonds), small tools,

travel, parking, supervision, and any other costs associated with labor, etc.] and are to be in accordance with the prevailing wages of the trade having jurisdiction in areas where the work is performed. The wage rates shall be valid for the life of the project. NOTE: Further, no mark-up shall be allowed on the premium time portion of the wage rate. These wage rates including detail and supporting documentation shall be made available within 5 days of verbal award and shall be broken down sufficiently representing all of the items noted above. All rates are subject to thorough analysis and subject to reduction if deemed inaccurate by the Program Manager and/or the Owner.

13. TAXES

Proposers should not include federal excise or state sales and use taxes, as NHPA is exempt from payment of such taxes. NHPA is also exempt from transportation taxes when goods are consigned to NHPA. NHPA will furnish tax exemption certificates upon satisfactory proof of delivery to NHPA. Shipments should be consigned to NHPA in care of the successful Proposer.

14. PERMITS

The successful Proposer shall obtain all required permits. The cost of the permits shall be included in the Proposal Price as part of applicable line items and no separate payment will be made. NHPA is not exempt from permit fees including, but not limited to, City of New Haven Building Department permits, City of New Haven or State street/sidewalk obstruction permits, City of New Haven Commission on Equal Opportunities contract compliance conference fees, MTA/Metro-North entry permits for access on or near train platforms, hazardous material permits, etc.

15. EQUAL EMPLOYMENT OPPORTUNITY

Attention of Proposers is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against because of their sex, sexual orientation, race, creed, color or national origin or physical handicap, or otherwise as prescribed by law.

Conferences concerning equal employment opportunity compliance by the successful Proposer may be scheduled with the City Commission on Equal Opportunities, and CHRO if applicable, prior to formal action authorizing the award of and/or notice to proceed for a contract by NHPA. The successful Proposer will receive forms and other documentation, which must be completed and returned to NHPA, the City Commission on Equal Opportunities, and CHRO if applicable, prior to the date of these conferences. The required information will detail the intended utilization of small business enterprises and minority/women/disabled business enterprises as subcontractors by the successful Proposer and the status of minorities, women and apprentices by the successful Proposer's current labor force in completing the work as included in the Proposal Documents. This information will be part of the successful Proposer's Affirmative Action/Equal Opportunity Compliance Report and will represent a significant focus of discussion at these conferences. The successful

Proposer is responsible for satisfying all applicable Affirmative Action/Equal Opportunity provisions as set forth in or referred to in these Proposal Documents.

NOTE: The City of New Haven Commission on Equal Opportunities charges a non-refundable fee, which varies depending on the dollar value of the construction contract, for its Equal Employment Opportunity Conference regarding contract compliance. Contact the City of New Haven Commission on Equal Opportunities for its fee schedule.

Information on the City's minority and women workforce requirements and resources is available from the City of New Haven Commission on Equal Opportunities, 200 Orange Street, New Haven, CT 06510, telephone (203) 946-8160. Also refer to General Condition Sections 210, 211 and 213.

16. NONDISCRIMINATION CERTIFICATION

The contract to be awarded is subject to contract compliance requirements mandated by [Sections 4a-60](#) and [4a-60a](#) of the Connecticut General Statutes; and, when the awarding agency is the State, [Sections 46a-71\(d\)](#) and [46a-81i\(d\)](#) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at [Section 46a-68j-21 through 43](#) of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by [Sections 4a-60](#) and [46a-71\(d\)](#) of the Connecticut General Statutes. According to [Section 46a-68j-30\(9\)](#) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to "aggressively solicit the participation of legitimate minority business enterprises as Proposers, contractors, subcontractors and suppliers of materials."

"Minority business enterprise" is defined in [Section 4a-60](#) of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: "(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of [Section 32-9n](#)."

"Minority" groups are defined in [Section 32-9n](#) of the Connecticut General Statutes as "(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4) Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . ." An individual with a disability is also a minority business enterprise as provided by [Section 4a-60g](#) of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of [Section 46a-68j-21\(11\)](#) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the Proposer's qualifications under the contract compliance requirements:

- (a) the Proposer's success in implementing an affirmative action plan;

- (b) the Proposer's success in developing an apprenticeship program complying with [Sections 46a-68-1 to 46a-68-17](#) of the Administrative Regulations of Connecticut State Agencies, inclusive;
- (c) the Proposer's promise to develop and implement a successful affirmative action plan;
- (d) the Proposer's submission of employment statistics contained in the "Employment Information Form", indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
- (e) the Proposer's promise to set aside a portion of the contract for legitimate minority business enterprises. See [Section 46a-68j-30\(10\)\(E\)](#) of the Contract Compliance Regulations.

17. UTILIZATION OF INTENDED SUBCONTRACTORS

Proposers shall submit with their Proposal, on forms provided (or using additional sheets if necessary), the Community Subcontractor Utilization Certificate indicating:

- A. The name, address and contact person of each Subcontractor the Proposer will use.
- B. The name, address and contact person of each Supplier of Materials the Proposer will use in order to satisfy the requirement for use of the NHPA Community Subcontractor Utilization Program. (For Suppliers of Materials, only list those Suppliers of Materials for which the Proposer will use in order to satisfy the requirement for use of SBE/MBE/WBE/DisBE or having a place of business within the City of New Haven.)
- C. The categories of the Subcontractors and/or Suppliers of Materials utilized (i.e., SBE, MBE, WBE, DisBE, any other Subcontractors).
- D. The nature of the work to be undertaken by each Subcontractor or Supplier of Materials.
- E. The dollar value of each Subcontract or Supply of Materials.
- F. The percentage of Proposer's entire contract dollar amount to be expended for SBEs.
- G. The percentage of Proposer's entire contract dollar amount to be expended for MBEs, WBEs and DisBEs.
- H. The percentage of Proposer's entire contract value to be expended for businesses having a place of business within the City of New Haven limits.

Note: In the event the Prime Contractor/General Contractor is a SBE, MBE, WBE or DisBE, its status as such does NOT contribute to the SBE, MBE, WBE and DisBE Subcontractor requirements.

Additional Note: If the Proposer (i.e., prime Proposer) has a place of business within the City of New Haven limits, then the relevant dollar amount is calculated by deducting from the

Proposer's entire contract value, the value of the subcontracts and suppliers of materials who do not have a place of business within the City of New Haven.

Proposers shall also submit with their Proposal a brief description of the experience and ability of each of the subcontractors and suppliers of materials together with the names and telephone numbers of at least three (3) references for each subcontractor and suppliers of materials.

The Proposer agrees that if awarded a contract for the Proposal, it shall execute a contract with the subcontractor and supplier of materials listed, except for good cause. The term "good cause" shall mean a subcontractor's or supplier of materials: (1) Death or physical inability, if the listed subcontractor or supplier of materials is an individual; (2) dissolution, if a corporation or partnership; (3) bankruptcy; (4) inability to furnish any required performance and payment bonds or required insurance coverage; (5) inability to obtain, or loss of a license necessary for the performance of the particular category of work to be performed; (6) failure or inability to comply with a requirement of law applicable to contractors, subcontractors, or construction, alteration, or repair projects; (7) failure on behalf of the subcontractor or supplier of materials to timely execute and return to Proposer the subcontract as follows: The Proposer shall present such subcontract to the subcontractor or each supplier of materials within five (5) business days of the issuance of the Notice to Proceed. The subcontractor or supplier of materials must execute and return the subcontract to Proposer within five (5) business days of its presentation by the Proposer; or, (8) inability to perform the subcontract or supply of materials.

In the event the successful Proposer seeks to substitute a subcontractor or supplier of materials for good cause, the successful Proposer shall file a written statement with/to the Chief Engineer, which statement shall include, but is not limited to:

- A. The name, address, telephone number and contact person of the original subcontractor or supplier of materials.
- B. The "good cause" claimed for such substitution.
- C. In the event the successful Proposer is claiming the good cause for such substitution is the failure of the subcontractor or supplier of materials to timely execute the subcontract, the dates of presentation of the subcontract to the subcontractor and the manner of delivery of the presentation (e.g. courier service, U.S. mail, etc.).
- D. In the event the good cause claims to be based on the inability of the subcontractor or supplier of materials to perform the subcontract, the grounds upon which the successful Proposer believes the subcontractor or supplier of materials will be unable to perform the subcontract.
- E. The names, address, telephone number and contact person of the proposed substitute subcontractor or supplier of materials and the information and documents required elsewhere in these Proposal Documents as to the submittals for subcontracts. The Proposer (or its agents) shall sign the written statement under oath. Upon receipt of the

written statement, the Chief Engineer or its representative shall send or deliver a copy of the statement to the subcontractor or supplier of materials as named in the statement submitted.

18. UTILIZATION OF SMALL AND MINORITY BUSINESS ENTERPRISES

- a. State law requires a minimum of twenty-five percent (25%) of the total contract be subcontracted to DAS-certified Small Business Enterprises (SBE), which includes but is not limited to DAS-certified Minority owned Business Enterprises (MBE), Women owned Business Enterprises (WBE), and Disabled owned Business Enterprises (DisBE) under the provisions of Connecticut General Statutes § 4a-60g as **subcontractors and/or suppliers of materials**. However, NHPA requires that a minimum of **thirty percent (30%) of total dollar amount of the contract** be subcontracted to SBE, which includes MBE, WBE, and/or DisBE, **as subcontractors and/or suppliers of materials**.
- b. State law also requires that a minimum of twenty-five percent (25%) of the total dollar amount (minimum 25%) of the work awarded to SBEs as described in Section 18.a. above, be awarded to MBE, WBE, and/or DisBEs. However, NHPA requires that a minimum of **twenty-five percent (25%) of total dollar amount of the contract** be subcontracted to MBE, WBE, and/or DisBE as **subcontractors and/or suppliers of materials**.
- c. NHPA reserves the right to request additional information from the Proposer about its subcontracting efforts.

Proposers shall submit with their Proposal, on the forms described in Section 17 of these Instructions to Proposers, a list of the SBEs and MBE, WBE and/or DisBE Subcontractors and Suppliers of Materials that the Proposer intends to use.

Proposers shall also refer to the *New Haven Parking Authority Community Subcontractor Utilization Program*, copy attached hereto and made a part hereof, and General Condition Section 212.

Upon request by NHPA, the Proposer shall submit signed contracts or letters of commitment with the SBE, MBE, WBE and/or DisBEs Subcontractors and Suppliers of Materials that the Proposer intends to use. Each SBE, MBE, WBE, and DisBE Subcontractor and Suppliers of Materials must be registered with and certified as such by the State of Connecticut Department of Administrative Services pursuant to State of Connecticut General Statutes § 4a-60g.

The minimum requirements are:

- a. The set-aside use of DAS-certified Small Business Enterprises (“SBE”) as **subcontractors and/or suppliers of materials** for a requirement of at least **30% of the Proposer’s entire contract value**;
- b. The set-aside use of DAS-certified Minority Owned Business Enterprises (“MBE”), Women Owned Business Enterprises (“WBE”) and/or Disabled Owned Business Enterprises (“DisBE”) as **subcontractors and/or suppliers of materials** for a requirement of at least

25% of the Proposer's entire contract value. Please note that the MBE, WBE, and/or DisBE are **part of** the DAS-certified Small Business Enterprises; and

c. Independent of the SBE/MBE/WBE/DisBE requirements herein, a minimum of **ten percent (10%) of the Proposer's entire contract value must include businesses having a place of business within the City of New Haven limits.** If the Proposer (i.e., prime Proposer) has a place of business within the City of New Haven limits, then the relevant percentage is calculated by deducting all of the subcontracts and suppliers of materials who do not have a place of business within the City of New Haven.

If a Proposer is unable to meet these minimum community participation requirements, then the Proposal shall be deemed non-responsive. However, in the event that a Proposer has met these minimum community participation requirements, the Proposer may be required to submit to NHPA and, if applicable, CHRO its efforts concerning compliance, upon request by NHPA or CHRO.

For reference, the City of New Haven's Office of Small Contractor Development Program's website address is: <https://www.newhavenct.gov/government/departments-divisions/small-contractor-development#ad-image-7> and its email contact is: lsnyder@newhavenct.gov . The following is a link to the Small Business Directory to search for small and minority business enterprises registered with the State of Connecticut Department of Administrative Services (DAS):

<https://biznet.ct.gov/SDSearch/SDSearch.aspx> The Minority Construction Council, Inc. is also a resource to assist in finding MBEs. Their website address is <https://mccforct.org/> .

The City of New Haven's Office of Small Contractor Development Program can assist you in finding **Small/Disadvantaged/Minority Business Enterprises**. The following is a link to the City of New Haven's Small Contractor Development Program:

<https://www.newhavenct.gov/government/departments-divisions/small-contractor-development#ad-image-7>

Any potential substitution of a **Small/Disadvantaged/Minority Business Enterprise** after the Proposal has been submitted shall be notified to NHPA immediately and good cause must be shown as for the reason of the substitution. NHPA, in its sole discretion, shall determine whether a substitution can be made.

NOTE: In the event the proposer is unable to meet the specified percentage SBE/MBE/WBE/DisBE requirements in the New Haven Parking Authority Community Subcontractor Utilization Program (copy included in the Proposal Documents), Proposers shall provide its detailed Good Faith Efforts with its Proposal, as noted in the enclosure. Proposers are reminded that one of the criteria in evaluating the proposals is use of SBE/MBE/WBE/DisBE subcontractors.

19. REQUIREMENTS OF THE STATE OF CONNECTICUT

Pursuant to the February 14, 2022 Lease, Operating, and Funding Agreement between the State of Connecticut, Department of Transportation and the City of New Haven for New Haven Union Station Campus, the Successful Proposer as *Contractor* shall comply with certain provisions required as stated herein per enclosed Exhibit “A” regarding work affecting Union Station Campus.

20. ADDITIONAL REQUIREMENTS OF THE CAPITAL FUNDING AGREEMENT

Pursuant to the Capital Funding Agreement between the State of Connecticut, Department of Transportation and the City of New Haven for New Haven Union Station Campus, the Successful Proposer as *Contractor* shall comply with certain provisions required as stated herein per enclosed Exhibit “A-1” regarding work affecting Union Station Campus, if funded through the Capital Funding Agreement.

21. TIME FOR RECEIVING PROPOSALS

Proposals received prior to the Proposal opening will be securely kept and unopened until the due date and time. The officer whose duty it is to open them will decide when the specified time has arrived, and no Proposal received thereafter will be considered.

22. OPENING OF PROPOSALS

After the time and place fixed for the opening of proposals, NHPA shall open and record the name of every proposer whose proposal was received within the time set for receiving proposals, irrespective of any irregularities therein. Proposers and other persons properly interested may request a list of the proposers received.

23. WITHDRAWAL OF PROPOSALS PRIOR TO OPENING

Proposals may be withdrawn via e-mail to the persons listed in Item 2, Interpretations and Addenda, of the Instructions to Proposals prior to the Proposal due date and time.

24. SELECTION OF SELECTED PROPOSER; REJECTION OF PROPOSALS

- A. During the selection process, NHPA may invite a Proposer to make a presentation to its staff, Board of Commissioners or other interested parties.
- B. NHPA will select the successful Proposer, if at all, as soon as practicable after the date of the Proposal opening. The successful Proposer shall be deemed to have the responsive Proposal which is in the best interest of NHPA based on price, qualifications, general experience, specific experience with working in active parking garages, specific experience with project management, responsiveness to the Proposal Documents,

approach to the services provided, organizational structure, proposed schedule, use of subcontractors and associated use of MBE/WBE/DisBEs, service quality and ability, exceptions to the draft form of agreement, and other factors it deems in its best interest at its sole discretion. The Proposer to whom the selection is made will be notified at the earliest possible date. NHPA, however, reserves the right to reject or further negotiate any and all Proposals or to waive any informality in submitted Proposal Documents whenever such rejection or negotiation or waiver is in NHPA's interest. NHPA also reserves the right to award multiple contracts at its sole discretion.

- C. The Proposer agrees that it will not award a contract or subcontract for any work to any contractor or subcontractor who is, at the time of award, ineligible for such contract under the provisions of any applicable regulations issued by the Secretary of Labor, United States Department of Labor, or is not qualified under applicable State and local laws or regulations.

25. EXECUTION OF AGREEMENT: PERFORMANCE BOND, AND LABOR AND MATERIAL BOND

- A. Subsequent to the award and within ten (10) days after the prescribed forms are presented for signature, or such other time as may be reasonably agreed to by NHPA, the successful Proposer shall execute and deliver to NHPA an Agreement in the form included in the Proposal Documents in such number of copies as NHPA shall require.

- B. Pursuant to Connecticut General Statutes § 49-41:

In the event the Proposal Price is less than \$50,000, **no** Performance Bond **nor** Labor & Material Bond shall be required;

In the event the Proposal Price is \$50,000 or more, but less than \$100,000, a Performance Bond **shall be required**, but **no** Labor & Material Bond shall be required;

In the event the Proposal Price is \$100,000 or more, both a Performance Bond and a Labor & Material Bond **shall be required**.

- C. Having satisfied all conditions of award as set forth elsewhere in these documents, the successful Proposer shall, within the period specified in paragraph "A" above, furnish a 100% surety bond in a penal sum not less than the Proposal Price as security for the faithful performance of the Contract, and a 100% labor and material bond for payment of all persons, firms, or corporations to whom the successful Proposer may become legally indebted for labor, materials, tools, equipment, or services of any nature including utility and transportation services, employed or used by him in performing the work. Such bonds shall be in the same form as those included in the Proposal Documents, or other form acceptable to NHPA, and shall bear the same date, or a date subsequent to that of the Agreement. These bonds shall be signed and issued by a guaranty or surety company satisfactory to NHPA, authorized and qualified to do business in the State of Connecticut,

and listed in the latest issue of the U.S. Treasury Circular 570, and the penal sum of any such bond shall be within the maximum specified for such company in Circular 570. The current power of attorney for the person who signs for any surety company shall be attached to such bonds.

- D. The failure of the successful Proposer to execute such Agreement and to supply the required bonds or submit the insurance policies required in the Proposal Documents within ten (10) days after the prescribed forms are presented for signature, or within such extended period as NHPA may grant based upon reasons determined sufficient by NHPA, will cause damage and loss to NHPA in amounts which cannot be ascertained with precision at this time. Such failure shall constitute a breach sufficient to cause forfeiture of the Proposer's Proposal bond or guaranty to NHPA as liquidated damages without further action being taken by NHPA other than to call the bond or guaranty.

NHPA may either award the contract to the next lowest responsible Proposer, re-advertise for Proposals, or anything else in its interests. Irrespective of whether a favorable Proposal is received by re-advertising, the defaulting Proposer shall have no claim against NHPA for a refund.

26. NOTICE TO PROCEED

NHPA will issue a written notice to proceed ("NTP") after the following: (1) execution of the agreement by all parties and (2) the accepted Proposer's delivery of the required documents, for an effective date stated in the NTP.

FORMS

PROPOSAL FORM

PARKING ACCESS AND REVENUE CONTROL SYSTEM REPLACEMENT

AT THE VARIOUS FACILITIES

NEW HAVEN, CONNECTICUT

NHPA Project No. 24-029

Proposer's Name

Date

TO: NEW HAVEN PARKING AUTHORITY

c/o Department of Finance
232 George Street
New Haven, Connecticut 06510

The undersigned, having inspected the sites and familiarized ourselves/myself with the local conditions affecting the cost of the work and the Proposal Documents dated August 2025 as prepared by DESMAN and on file with the New Haven Parking Authority, hereby propose to provide all labor, materials, tools, equipment and transportation necessary to complete Parking Access & Revenue Control System Replacement at the Various Facilities, as defined in the Proposal Documents for the Proposal Price of

DOLLARS
(\$ _____).

This Proposal Price shall include all charges such as overhead, profit, insurance, permits, escalation, etc.

The following Addendum by number have been received: _____

NOTE: Proposers who do not list all addenda issued by NHPA for this proposal may be considered nonresponsive to this proposal and their proposal may be rejected.

Submitted herewith is the Proposal Price Itemization including an amount for all project components required by the Proposal Documents. The sum of all listed components shall equal the Proposal Price.

Submitted herewith are all the forms as listed in Section 4 of the Instructions to Proposers, in accordance with these Instructions to Proposers.

We/I acknowledge that should conditions make it necessary to revise the scope of the project, the Proposal Price Itemization shall serve as the basis for adjustments to the Proposal Price.

PROPOSER'S NAME

PARKING ACCESS AND REVENUE CONTROL SYSTEM REPLACEMENT

AT THE VARIOUS FACILITIES

NEW HAVEN, CONNECTICUT

PROPOSAL PRICE ITEMIZATION

NHPA Project No. 24-029

Proposal Item 1 – General Provisions:

A. General Mobilization/Demobilization/Miscellaneous Coordination.

This line item shall consists of all labor, materials, tools and equipment required for setting-up general plant, storage/staging areas and facilities required to facilitate construction or as otherwise required by applicable Federal, State and Local laws; and the general mobilization of equipment required for the completion of the work as shown within the Bid Documents and all expenses for de-mobilization off the site upon completion of all work as shown within the Bid Documents. It will be the contractor's responsibility to obtain all necessary permits to perform the work.

Electricity (power) and water required for the completion of the work shall be furnished by the Owner at existing fixtures or outlets (The Owner will not provide any temporary pipes, cables, etc.). If the capacity of existing utilities is insufficient for the contractor's use, the Contractor shall be responsible for supplementing this capacity as required at no cost to the Owner. The contractor shall provide temporary lighting within designated work areas, as required.

The Contractor shall furnish, install, maintain, relocate and remove all signs, barricades, cones, warning lights, and other safety control devices and temporary signage required for the proper execution of the project. The Engineer and the Owner shall review the safety control device placement before work begins and prior to the beginning of work on any subsequent construction stages. Any deficiencies in the location or arrangement of devices shall be corrected by the contractor before starting work or as the work progresses towards completion. **Contractor shall note that while this Bid Item 1.A shall include the procurement and installation of all applicable safety & traffic control devices (i.e. barricades, etc.) as well as the coordination and installation of temporary signage, the material procurement of the temporary signage shall be included in Proposal Item 6. Work associated with both the procurement and installation of Project Signs (reference Special Conditions 336) is included in its totality within this Proposal Item 1.A.**

The Contractor shall provide and maintain adequate protection of all preexisting architectural, structural, mechanical, electrical, plumbing components and/or features within the confines of in the work areas that are to remain in-place. The work shall include the dismantling of any preexisting architectural, structural, mechanical, electrical, plumbing components and/or features within the confines of in the work areas (such as the temporary moving/relocation of tenant furniture, equipment, etc.) which might be required in order to perform the work specified. The temporarily dismantled installations shall be reinstalled as soon as possible to a condition equal to or better than the condition existing prior to the commencement of construction.

PROPOSER'S NAME

Work shall also include the provision of an effective ventilation system to safely remove all dust and hazardous fumes generated from demolition, any surface treatment applications, or other work. Contractor shall be required to remove any and all loose/spalled overhead or vertical concrete from the structure (concrete framing elements or deck) prior to the start of any demolition activities to prevent any deteriorated concrete from being jarred loose in an uncontrolled fashion. Contractor shall be required to coordinate all aspects of his work with NHPA management and operations staff as well as facility security personal throughout construction.

The contractor shall submit to the Owner/Engineer documentation of all pre-existing non-functioning electrical/mechanical systems within the entire work area. This documentation should be based on the contractor's condition survey performed immediately prior to the scheduled mobilization. The contractor shall not start the mobilization until the Owner approves of this submittal.

This work consists of items not otherwise specifically indicated or shown on the plans but which are ancillary to the specified scope of work being performed, or part of the overall Scope of Work or otherwise not noted or assigned to other Proposal Items.

Contractor shall note that payment for this item shall be distributed in proportion to the total amount of all contract work complete in place unless otherwise approved in writing by NHPA.

Lump Sum = \$ _____

B. Provision of Bonds, Permits, and Insurance.

Work shall consist of the costs associated with the procurement of all bonds, permits, and insurance necessary for this project. Provision of bonds shall include, but not be limited to, Labor & Material Bonds, Performance Bonds, etc. It shall be the contractor's sole responsibility to obtain all necessary permits to perform the work, including, but not limited to, Building, Electrical, Mechanical, Plumbing, and Street Obstruction permits, if required. Insurance requirements are described in General Conditions Section 111 and Special Conditions Section 313.

Lump Sum = \$ _____

SUB-TOTAL PROPOSAL ITEM 1: = \$ _____

Proposal Item 2 – Work related to the Air Rights Garage, Crown Street Garage, Temple Street Garage, Temple Medical Garage, 270 State Street Garage and Granite Square Garage:

Work shall consist of the replacement the existing parking access & revenue control equipment with the new equipment, as designated per the specified inventory, as well as the provision and integration of the equipment with the system and cloud-based management software, with applicable support and service all as specified, all in accordance with the project requirements, along with all other work required for the satisfactory performance of this work item.

Contractor shall note that due to functional requirements, the nested parking areas on Levels 4, 6 & 8 of the Air Rights Parking Garage is separated from the equipment for the main entrances and exits on Levels 1 & 2, as noted. In addition, while the equipment on levels 4, 6 & 8 will be replaced as specified, work shall include the installation of additional equipment to more fully and accurately count the vehicles into and out of the nested parking on levels 4, 6 & 8 as specified.

Due to flooding, the equipment at the exit to Dr. Rev. Martin Luther King Blvd, at the Temple Street Garage, is exposed to frequent damage. Therefore, work shall include the unique mounting of the equipment, at the exit, onto a hydraulic lift system that would raise the equipment above the water level, when flooding occurs. The system shall be connected with a high water sensor so that the equipment is raised automatically. NHPA is open to alternative options as may be proposed.

In addition to the exit to Dr. Rev. Martin Luther King Blvd, at the Temple Street Garage, Contractor shall note that certain electrical repairs are required at the entrance from Crown Street, consisting of replacement of conduit and re-routing it down through the floor slab, along the soffit, and up again as required; Contractor shall coordinate with the Engineer accordingly.

Contractor shall note that work regarding Granite Square Parking Garage shall involve the installation of new equipment at the main entrance/exit on the first level (street level). Although there is an existing island with a booth, no equipment is currently located at the island; therefore, Work shall include the installation of new infrastructure accordingly.

A. Work related to the Air Rights Parking Garage:

1. Work regarding Levels 1 & 2

Lump Sum = \$ _____

2. Work regarding Levels 4, 6 & 8

Lump Sum = \$ _____

PROPOSER'S NAME

B. Work related to the Crown Street Parking Garage:

Lump Sum = \$ _____

C. Work related to the Temple Street Parking Garage:

Lump Sum = \$ _____

D. Work related to the Temple Medical Parking Garage:

Lump Sum = \$ _____

E. Work related to the 270 State Parking Garage:

Lump Sum = \$ _____

F. Work related to the Granite Square Parking Garage:

Lump Sum = \$ _____

SUB-TOTAL PROPOSAL ITEM 2: = \$ _____

Proposal Item 3 – Work related to the Union Station Parking Garage:

Work shall consist of the replacement the existing parking access & revenue control equipment with the new equipment, as designated per the specified inventory, as well as the provision and integration of the equipment with the system and cloud-based management software, with applicable support and service all as specified, all in accordance with the project requirements, along with all other work required for the satisfactory performance of this work item.

Lump Sum = \$ _____

PROPOSER'S NAME

Proposal Item 4 – Work related to the Under Air Rights Surface Lot, Elm Orange Surface Lot, State Wall Surface Lot, State Fair Surface Lot, State Trumbull Surface Lot, State Pulaski Surface Lot, and Whalley Blake Surface Lot:

Work shall consist of the replacement the existing parking access & revenue control equipment with the new equipment, as designated per the specified inventory, as well as the provision and integration of the equipment with the system and cloud-based management software, with applicable support and service all as specified, all in accordance with the project requirements, along with all other work required for the satisfactory performance of this work item

Regarding the State Wall Lot, Proposer shall note that an AT&T Duct Bank is located underground within the vicinity of the new equipment. Proposer shall take extreme caution in identifying and locating this bank prior to start of work; this duct bank shall not be disturbed nor damaged. Proposer shall further note that, due to the installation of the new island and equipment, Work shall include modifications of the parking stall and traffic markings, necessitating the re-striping and re-application of all markings for the State Wall Lot; Contractor shall verify all markings and adjustments prior to start of work and shall remove all conflicting marking s accordingly.

Therefore, prior to start of work and as part of its submittal requirements, Contactor shall provide shop drawings depicting the intended routing of the controls, conduit and wiring infrastructure, as well as placement of new island and all equipment, for review by the Owner/Engineer; work shall not be started until an accepted set of drawings are returned to the Contractor.

Regarding the State Wall Lot, Proposer shall note that an AT&T Duct Bank is located underground within the vicinity of the new equipment. Proposer shall take extreme caution in identifying and locating this bank prior to start of work; this duct bank shall not be disturbed nor damaged. Proposer shall further note that, due to the installation of the new island and equipment, Work shall include modifications of the parking stall and traffic markings, necessitating the re-striping and re-application of all markings for the State Wall Lot; Contractor shall verify all markings and adjustments prior to start of work and shall remove all conflicting marking s accordingly. Acceptable marking paint shall be Setfast Low VOC Acrylic Traffic Marking Paint (2 coats minimum), by Sherwin Williams or approved equal.

Contractor shall further note that the ungated lots will use ALPR and multi-space meters rather than the PARCS equipment used in the gated lots and garages. The Proposer shall be fully responsible for integrating the ungated lot LPR with the PARCS system. NHPA also desires to permit transient parking payment in the ungated lots through the appropriate Apps.

A. Work related to the Under Air Rights Surface Lot:

Lump Sum = \$ _____

PROPOSER'S NAME

B. Work related to the Elm Orange Surface Lot:

Lump Sum = \$ _____

C. Work related to the State Wall Surface Lot:

1. All specified work except as noted:

Lump Sum = \$ _____

2. Re-application of all Traffic Markings, with specified adjustments

Lump Sum = \$ _____

D. Work related to the State Fair Surface Lot:

Lump Sum = \$ _____

E. Work related to the State Trumbull Surface Lot:

Lump Sum = \$ _____

F. Work related to the State Pulaski Surface Lot:

Lump Sum = \$ _____

G. Work related to the Whalley Blake Surface Lot:

Lump Sum = \$ _____

SUB-TOTAL PROPOSAL ITEM 4: = \$ _____

Proposal Item 5 – Refurbishment of Booths

Work shall consist of the repair and/or refurbishment of the booths at the various locations, all as detailed in the specifications, along with all other work required for the satisfactory performance of this work item. Contractor shall note that work shall include cleaning, miscellaneous repair of the exterior surfaces, re-painting of the exterior surfaces, cleaning of the glass with replacement of glass as required, adjustment and repair of the doors and windows including replacement as required, replacement of the roofing systems, re-finishing of the interior surfaces, such as but not limited to countertops, shelves, etc., replacement of light fixtures, replacement of HVAC equipment, as well as all other materials and equipment related to the booths so as to completely refurbish and/or modernize the booths. Work shall also consist of all electrical work and coordination to support the refurbishment and/or repairs/replacement; all as shown on the drawings, in accordance with the specifications, and/or otherwise directed by the Engineer, along with all other work required for the satisfactory performance of this work item.

Contractor shall note that while the booths on levels 1 & 2 of the Air Rights Parking Garage are to be refurbished as part of this Scope, the booth on level 4 is excluded from the Scope. Contractor shall further note that the booth at the Granite Square Garage does not currently have ductwork to the exterior perimeter; Work shall therefore include, in addition to the specified HVAC improvements, the installation of new ductwork as specified, shown on the drawings and as directed by the Engineer.

Contractor shall note that the existing booth at the Under Air Rights Surface Lot shall be replaced with a new booth, as designated on the Drawings. Work shall include the removal and disposal of the existing booth, followed by the placement and installation of the new booth, including the installation of a new concrete ADA-compliant ramp as shown, along with all other work required for the satisfactory performance of this work item. Work shall also include verification of the placement of the ramp prior to start of work, as well as all coordination work required for the installation and connection of the various electrical, mechanical, and communication components designated on the Drawings and/or as directed by the Owner/Engineer.

Except as noted above regarding Granite Square Garage, Contractor shall note that the existing ductwork serving the various booths is in varying condition per location. Therefore, Work shall include the Contractor coordinating with applicable parties to properly identify the scope of the work required, following a visual survey of the ductwork to identify all potential repairs, followed by the Contractor providing a written proposal for the required repairs for review and approval. Upon approval of Contractor's proposal by the owner; payment for this item of work shall be made on a time and material basis at cost plus 15% verified by appropriate backup documentation, or alternately by acceptable lump sum as approved by the Owner. If the work is performed by a subcontractor, the General Contractor will be allowed to add an additional 5% to the time and material costs of the subcontractor.

PROPOSER'S NAME

A. Work related to the Air Rights Parking Garage:

Lump Sum = \$ _____

B. Work related to the Crown Street Parking Garage:

Lump Sum = \$ _____

C. Work related to the Temple Street Parking Garage:

Lump Sum = \$ _____

D. Work related to the Temple Medical Parking Garage:

Lump Sum = \$ _____

E. Work related to the 270 State Parking Garage:

Lump Sum = \$ _____

F. Work related to the Granite Square Parking Garage:

Lump Sum = \$ _____

G. Work related to the Union Station Parking Garage:

Lump Sum = \$ _____

H. Work related to the Under Air Rights Surface Lot

Lump Sum = \$ _____

I. Allowance for Repairs to the Ductwork.

Allowance = \$25,000.00

PROPOSER'S NAME

SUB-TOTAL PROPOSAL ITEM 5: = \$ _____

Proposal Item 6 – Provision of Temporary Traffic Control Signage and Related Graphics:

Work shall consist of the provision of any and all temporary signage and graphics for use during construction, for Work impacting the interiors of the Parking Garages. All temporary signage shall be of a professional nature, as approved by Owner prior to procurement and prior to its installation, and shall consist of specified materials, along with all other work required for the satisfactory performance of this work item. All temporary signage required for the successful execution of the repair work shall become the property of NHPA unless otherwise approved.

Contractor shall note that while this Allowance shall solely pertain to the procurement of the applicable temporary signage, all required coordination with applicable parties to organize the temporary work areas both inside and outside of the facility, followed by the proposing and installation of associated temporary signage, along with the procurement and provision of temporary traffic control devices (i.e. barricades, etc.) shall be included in Bid Item 1.A, General Mobilization/Demobilization.

Allowance = **\$10,000.00**

Proposal Item 7 – Security Camera and Door Control System Allowance.

Work shall consist of designing and installing security cameras and door control systems for all pedestrian entrances and at all garages, ensuring seamless integration with the PARCS system for enhanced security and access control.

Allowance = **\$500,000.00**

PROPOSER'S NAME

Proposal Item 8 – Miscellaneous Contingency Allowance.

This contingency allowance shall pertain to any and all necessary work that may arise due to unforeseen conditions not covered by the Proposal Documents and which may need to be performed at the direction of the Owner/Engineer. Work shall include the Contractor coordinating with applicable parties to properly identify the scope of the additional work required, followed by the Contractor providing a written proposal for the required repairs for review and approval.

Upon approval of Contractor's proposal by the owner; payment for this item of work shall be made on a time and material basis at cost plus 15% verified by appropriate backup documentation, or alternately by acceptable lump sum as approved by the Owner. If the work is performed by a subcontractor, the General Contractor will be allowed to add an additional 5% to the time and material costs of the subcontractor.

Allowance = \$20,000.00

SUB-TOTAL PROPOSAL ITEM 1: = \$ _____

SUB-TOTAL PROPOSAL ITEM 2: = \$ _____

SUB-TOTAL PROPOSAL ITEM 3: = \$ _____

SUB-TOTAL PROPOSAL ITEM 4: = \$ _____

SUB-TOTAL PROPOSAL ITEM 5: = \$ _____

SUB-TOTAL PROPOSAL ITEM 6: = \$ \$10,000.00

SUB-TOTAL PROPOSAL ITEM 7: = \$ \$500,000.00

SUB-TOTAL PROPOSAL ITEM 8: = \$ \$20,000.00

**TOTAL PROPOSAL ITEMS 1 THROUGH 8 (THE "PROPOSAL PRICE FOR
MODERNIZATION & REPAIR")**

= \$ _____

PROPOSER'S NAME

The Proposer hereby proposes the following all-inclusive fees for each of the line items below:

PARCS Solution Hardware and Device Line Items:

PARCS SOLUTION HARDWARE AND DEVICE LINE ITEMS			Comments/Notes
ITEM	DESCRIPTION	UNIT PRICE	
	PRIMARY LANE EQUIPMENT		
1	Barrier Gate w/articulating arm	ea. \$	
2	Barrier Gate w/straight arm	ea. \$	
3	Entry Station/Tkt Printer/Intercom,Pinhole Camera, 2D Scanner, Lg Range Proximity Reader, Color Display Screen, NFC/Bluetooth Rdr/P2PE CC Reader	ea. \$	
4	Exit Station/Intercom, Exit Verifier, Receipt Printer/Pinhole Camera, 2D Scanner, Lg Range Proximity Reader, Color Display Screen, NFC/Bluetooth Rdr/P2PE CC Reader	ea. \$	
5	Free-Standing Lg Range Proximity Reader/2D Barcode Scanner, Intercom/Pinhole Camera w/ Pedestal Mount	ea. \$	
6	Free-Standing Lg Range Proximity Reader/w Pedestal Mount	ea. \$	
7	Automatic License Plate Recognition (ALPR) Cameras w/ Post Mount and related Hardware at specified Lanes	ea. \$	
8	In Ground Vehicle Detection Loops (2 per directional lane)	ea. \$	
9	Dual Channel Loop Detector	ea. \$	
	AUTOMATIC PAY STATIONS		
10	Auto Paym't Mach. Credit-Cash Only P2PE Reader/NFC-Bluetooth /Intercom/Pinhole Camera/2D Scanner/Color Display Screen/Bill Recycler	ea. \$	
	CENTRAL PARKING OPERATIONS OFFICE (Ramp 6)		
11	VoIP Mass Intercom System Terminal	ea. \$	
12	Mass Validation Encoder	ea. \$	
13	Merchant Validator	ea. \$	
	NEW SIGNAGE		
14	"# Spaces Available / Full " - 1-Sided LED Status Sign	ea. \$	
15	"Open to the Public" - 1-Sided LED Status Sign	ea. \$	
16	"# Spaces Available/Full" - Two 1-sided LED Sign Panel Insert to Sidewalk Monument	ea. \$	
17	"# Spaces Available/Full" - Two 1-sided LED Sign Panel Insert to existing Exterior Façade Sign at Ramp 6	ea. \$	
	PEDESTRIAN SAFETY WARNING SYSTEM		
18	Pedestrian Hazardous Area Sounder Alarm "Uncertified" (1 Specified Per Lane)	ea. \$	
19	Pedestrian Hazard Alert Strobe Light "Uncertified" (1 Specified Per Lane)	ea. \$	
	EXISTING SYTEMS INTEGRATIONS		
20	Automated Parking Guidance System (APGS) Integration	ea. \$	
	PERMANENT REMOVAL & DISPOSAL: EXISTING HARDWARE/EQUIPMENT		
21	Removal of AVI Transponders	ea. \$	
22	Removal of Attendant Booths	ea. \$	
23	Removal of "Contract Parker Only" Signs	ea. \$	
24	Removal of "Open /Full" Signs	ea. \$	
25	Removal of POF Stations	ea. \$	
	CENTRAL FACILITY MANAGEMENT SYSTEM SERVER SOFTWARE		
26	PARCS Software	ea. \$	
27	Credit Card Software	ea. \$	
28	Hotel Parking Validation Management System Software	ea. \$	
29	License Plate Recognition Software	ea. \$	
30	Intercom Server Software and Licenses	ea. \$	
31	FMS Interface, Counts, Gate Ops, Intercom connectivity with Hilton Valet Area	ea. \$	
32	SP+ Billing System Integration (IBM AS400)	ea. \$	

PROPOSER'S NAME

PARCS SOLUTION HARDWARE AND DEVICE LINE ITEMS				Comments/Notes
ITEM	DESCRIPTION	UNIT PRICE		
	RECOMMENDED SPARE PARTS (Based on the scope and size of the PARCS Solution include a per unit pricing for each different recommended spare parts unit or item - add lines if necessary)			
33	POF Station - Bill Recycler	ea.	\$	
34	POF Station - Bill Vault	ea.	\$	
35	Aluminum Articulated Barrier Gate Arm	ea.	\$	
36	Aluminum Straight Barrier Gate Arm	ea.	\$	
37	2D Scanner	ea.	\$	
38	P2PE Credit Card Reader	ea.	\$	
39	Pedestrian Hazard Strobe Light Bulb	ea.	\$	
40	Thermo Ticket/Receipt Printer	ea.	\$	
	OTHER OMITTED BUT REQUIRED ITEMS (Provide a list of that defines the different required items, provide required unit quantities for the System, and by ramp, and provide per unit pricing - add lines if necessary)			
		ea.	\$	
		ea.	\$	
		ea.	\$	
		ea.	\$	
		ea.	\$	
		ea.	\$	
EXTENDED WARRANTY ON PARCS SYSTEM (After MFG's based warranty covering first 24 months)				
Maintenance Contract Fee (Year-One Included)		NC		
Maintenance Contract Fee (Year-Two Included)		NC		
Maintenance Contract Fee (Year-Three)		Per Year	\$	
Maintenance Contract Fee (Year-Four)		Per Year	\$	
Maintenance Contract Fee (Year-Five)		Per Year	\$	
Maintenance Contract Fee (Year-Six)		Per Year	\$	
Maintenance Contract Fee (Year-Seven)		Per Year	\$	
Maintenance Contract Fee (Year-Eight)		Per Year	\$	
Maintenance Contract Fee (Year-Nine)		Per Year	\$	
Maintenance Contract Fee (Year-Ten)		Per Year	\$	
ON-GOING MONTHLY OR ANNUAL FEES & CHARGES NOT INCLUDED ANYWHERE ABOVE (define and specify whether pricing is Monthly or Annually for System, or by location - add lines as necessary)				
On-Going Cloud Hosting (specify Monthly or Annually)			\$	
On-Going Cloud Hosting (also provide a 3-year Upfront Payment in Lieu Paying Monthly or Annually, if available.)			\$	
Any Other On-Going System Operating Fees & Costs (itemize if appropriate, and specify as either a Monthly or an Annually cost)			\$	

PROPOSER'S NAME

Extended Warranty Per Each Facility Location:

Facility	Year 1	Year 2	Year 3	Year 4	Year 5
Air Rights Garage	N/A*	N/A*			
Crown Street Garage	N/A*	N/A*			
Granite Square Garage	N/A*	N/A*			
Temple Medical Garage	N/A*	N/A*			
Temple Street Garage	N/A*	N/A*			
270 State Street Garage	N/A*	N/A*			
Union Station Garage	N/A*	N/A*			
Elm/Orange Lot	N/A*	N/A*			
State/Wall Lot	N/A*	N/A*			
State/Chapel Lot	N/A*	N/A*			
State/Fair Lot	N/A*	N/A*			
State/Trumbull Lot	N/A*	N/A*			
State/Pulaski Lot	N/A*	N/A*			
Whalley/Blake Lot	N/A*	N/A*			
Under ARG Lot	N/A*	N/A*			
TOTAL	N/A*	N/A*			

*N/A = Not applicable as service price for the first 2 years is included in the installation price.

Facility	Year 6	Year 7	Year 8	Year 9	Year 10
Air Rights Garage					
Crown Street Garage					
Granite Square Garage					
Temple Medical Garage					
Temple Street Garage					
270 State Street Garage					
Union Station Garage					
Elm/Orange Lot					
State/Wall Lot					
State/Chapel Lot					
State/Fair Lot					
State/Trumbull Lot					
State/Pulaski Lot					
Whalley/Blake Lot					
Under ARG Lot					
TOTAL					

Grand Total (Years 1 through 10) = \$ _____

PROPOSER'S NAME

PROPOSAL GUARANTEE

The information in this Proposal is correct to the best information, knowledge and belief of the undersigned. It is submitted without collusion with any person, individual or corporation.

Contractor

Signature

Name

Title

Address

Telephone/E-mail Address

Witness

State of _____, County of _____

On this _____ day of _____, 20____ before me personally

came _____, to me known who did depose and say that

_____ is _____

of _____,

the Corporation/Partner/Individual described in and which executed the foregoing

instrument and that such instrument is duly submitted on behalf of

_____.

Notary Public

PROPOSAL BOND

KNOW ALL MEN BY THESE PRESENTS, THAT we the undersigned, _____ as
PRINCIPAL, and _____, as
SURETY are held and firmly bound unto the New Haven Parking Authority ("NHPA")
in the penal sum of _____
_____ DOLLARS (\$ _____),
together with any costs, expenses and fees, including reasonable attorney's fees, incurred
by NHPA in any action taken to enforce this bond, in lawful money of the United States,
for the payment of which sum well and truly to be made, we bind ourselves, our heirs,
executors, administrators, successors, and assigns, jointly and severally, firmly by these
presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal
has submitted the accompanying Proposal dated _____,
for _____
_____.

NOW, THEREFORE, if the Principal (a) shall not withdraw said Proposal within
the period specified therein after the opening of same, or, if no period be specified, within
sixty (60) days after the said opening, and shall within the period specified therefor, or, if
no period be specified, within ten (10) days after the prescribed forms are presented to
him for signature, enter into a written Contract with NHPA in accordance with the
Proposal as accepted, and give bond with good and sufficient surety or sureties, as may
be required for the faithful performance and proper fulfillment of such Contract; or (b)
shall withdraw the Proposal within the period specified prior to the opening of proposals;
or (c) shall fail or refuse to enter into such Contract and give such bond within the time
specified, if and only if the Principal shall make payment to NHPA in an amount equal to
the difference between the amount specified in said Proposal and the amount for which
NHPA may procure the required work or supplies or both, if the latter amount be in
excess of the former, together with costs, expenses and fees, including reasonable
attorney's fees incurred by NHPA as a result of said failure or refusal, then the above
obligation shall be void and of no effect, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals this _____ day of _____, 20____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In the presence of:

(Individual Principal)

(Business Address)

(Entity)

By:_____

(Business Address)

Attest:

(TITLE, DULY AUTHORIZED)

(Business Address)

(Affix
Seal)

By:_____

Attest:

(Surety, DULY AUTHORIZED)

(Business Address)

(Affix
Seal)

Countersigned

By:_____

By:_____

Attorney-in-Fact, State of _____

FORM OF SURETY GUARANTY
(To Accompany Proposal)

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the sum of \$1.00, lawful money of the United States, the receipt whereof is hereby acknowledged, paid the undersigned corporation or entity, and for other valuable consideration, the

(Name of Surety Company)

a corporation or entity organized and existing under the laws of the State of _____ and licensed to do business in the State of Connecticut, certifies and agrees, that if Contract No. _____, Project No. _____ is awarded to _____,

(Name of Proposer)

the undersigned corporation or entity will execute the bond or bonds as required by the Contract Documents and will become surety in the full amount of the Contract Price for the faithful performance of the contract and for payment of all persons supplying labor or furnishing materials in connection thencewith.

(Surety)

(To be accompanied by the usual proof of authority of officers of surety company to execute the same.)

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____,
certify that I am the _____
Secretary of the Corporation OR duly authorized by the ENTITY named as Principal
in the within bond, that _____ who
signed the said bond on behalf of the Principal was then
_____ of said corporation or entity;
that I know this signature and this signature thereto is genuine, and that said bond was
duly signed, sealed and attested to, for and in behalf of said corporation or entity by
authority of its governing body.

DULY AUTHORIZED ON BEHALF OF _____

Title _____ Seal)

(The Surety Company must append statement of its financial condition and a copy of the resolution authorizing the execution of bonds by officers of the company, and the power-of-attorney of the surety company's attorney-in-fact, authorized to act within the State of Connecticut.)

NON-COLLUSION AFFIDAVIT OF PROPOSER

PARKING ACCESS & REVENUE CONTROL SYSTEM REPLACEMENT AT NEW HAVEN PARKING AUTHORITY FACILITIES NEW HAVEN, CONNECTICUT NHPA PROJECT #24-029

State of _____
County of _____ ss.

_____, being first duly sworn, deposes and says that:

1. I am (individual, owner, member, partner, officer, director, representative, or agent) of _____ the Proposer that has submitted the attached Proposal;
2. I am fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such Proposal;
3. Such Proposal is genuine and is not a collusive or sham Proposal;
4. Neither the said Proposer nor any of its members, officers, partners, directors, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Proposer, firm or person to submit a collusive or sham Proposal in connection with the contract for which the attached Proposal has been submitted or to refrain from proposing in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm or person to fix the price or prices in the attached Proposal or of any other Proposer, or to fix any overhead, profit or cost element of the Proposal prices or the Proposal price of any other Proposer, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the New Haven Parking Authority by any person interested in the Proposal;
5. The price or prices quoted in the attached Proposal are fair and proper and are not tainted by collusion, conspiracy, connivance or unlawful agreement on the part of the Proposer or any of its members, officers, partners, directors, owners, agents, representatives, employees, or parties in interest, including the affiant.
6. No officer or employee or person whose salary is payable in whole or in part from the New Haven Parking Authority is directly or indirectly interested in this Proposal, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.

(Signed) _____

Title

Subscribed and sworn before me this _____ day of _____, _____.

Title

My Commission expires _____.

STATEMENT OF PROPOSER'S QUALIFICATIONS

PARKING ACCESS & REVENUE CONTROL SYSTEM REPLACEMENT AT NEW HAVEN PARKING AUTHORITY FACILITIES NEW HAVEN, CONNECTICUT NHPA PROJECT #24-029

(Note: To be submitted by the Proposer with its Proposal)

All questions must be answered, and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Proposer may submit any additional information desired but complete each item on this Form even if just to reference other attached sheets.

1. Name of Proposer.
2. Proposer's main office address, telephone number, and e-mail address.
3. Proposer's Form of Business Organization (e.g., corporation, LLC, partnership, sole proprietorship), when organized, and where organized. Please also provide proof of active status.
4. List and provide copies of all relevant licenses, certifications, permits, and/or similar approvals. Include applicable dates of renewal and expiration.
5. General character of services/work performed by Proposer's business.

6. How many years has the Proposer been engaged in business under its present firm or trade name?
7. Outline the background and experience of the Proposer regarding the proposed services. Note especially any relevant and specific experience with working in parking garages, with working in active, occupied facilities, and with project management. Identify the trades which will be provided for this Project. Identify the key personnel who will have primary responsibility for the performance of the required services in the various fields of expertise involved. Provide professional license certifications and resumes noting professional and academic qualifications and experience.
8. Describe any proposed Subcontractors, and provide their qualifications, experience, and scope of services. Identify if any are minority-owned, woman-owned, disabled-owned, or small business enterprises, and provide certification.
9. Provide the name, address, phone number, and e-mail address and/or letters of references of at least three (3) references regarding your business qualifications.
10. Describe the Proposer's ability to provide required insurance coverage (reference Section 208 of the draft form of agreement).

11. Has the Proposer ever defaulted on a contract or breached a contract obligation? If so, state the nature of default or breach, status, and provide an explanation.
12. Has the Proposer ever failed to complete any work awarded? If so, provide an explanation.
13. Has the Proposer ever been disqualified, ineligible, suspended or otherwise barred by any applicable federal, state or municipal government? If so, provide an explanation.
14. Has the Proposer or any entity which it has or had common ownership ever filed for bankruptcy, receivership, or reorganization within the last ten years? If so, provide an explanation.
15. The Proposer may also include supplemental information of the Proposer's choice such as brochures, etc. This supplemental information is in addition to the specific items above and must be included as appendices.

The undersigned hereby represents that the above information is true and accurate to the best of their knowledge and further authorizes and requests any person, firm, or corporation to furnish any

information requested by the New Haven Parking Authority in verification of the recitals comprising this Statement of Proposer's Qualifications.

Dated at _____ this _____ day of _____, 2025.

(Name of Proposer)

By: _____

Title: _____

State of _____, County of _____

On this _____ day of _____, 2025 before me personally came _____, to me known who did depose and say that

is the (individual, owner, member, partner, officer, director, representative, or agent) described in and which executed the foregoing instrument and that such instrument is duly submitted on behalf of

Notary Public

EQUAL EMPLOYMENT OPPORTUNITY AGREEMENT

During the performance of this contract, the Contractor agrees:

- (a) To comply with all provisions of Executive Order 11246, Executive Order 11375, and Executive Order 12138, the Connecticut Fair Employment Practices Act, and the City of New Haven Contract Compliance Ordinance Chapter 12 ½, as all are amended from time to time, including all standards and regulations which are promulgated by the government authorities who established such acts and requirements, and all standards and regulations are incorporated herein by reference;
- (b) Not to discriminate against any employee or applicant for employment because of race, color, religion, age, sex, gender identity or expression, sexual orientation, physical disability or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to race, color, religion, sex, gender identity or expression, sexual orientation, age, national origin, or physical disability. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising, layoff, or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship;
- (c) To post notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause in conspicuous places available to employees and applicants for employment;
- (d) To state, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, gender identity or expression, sexual orientation, age, national origin, or physical disability.
- (e) To send to each union or representative of workers with whom he/she has a collective bargaining agreement, or other contract or understanding, a notice advising the labor union or worker's representative of the Contractor's commitments under the equal opportunity clause of the City of New Haven, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The Contractor shall register all workers in the skilled trades, who are below the journeyman level, with the Connecticut Department of Labor, Office of Apprenticeship Training;
- (f) To utilize labor department and city sponsored manpower programs as a source of recruitment, and to notify the contract compliance unit and such programs of all job vacancies;
- (g) To take affirmative action to negotiate with qualified minority and women contractors for any work which may be proposed for subletting or for any additional services, supplied, or work which may be required as a result of this contract;
- (h) To cooperate with city departments in implementing required contract obligations for increasing the utilization of minority and women business enterprises;
- (i) To furnish all information and reports required by the City of New Haven contract compliance director pursuant to section 12 1/2-19 through section 12 1/2-32 of the City Ordinance and to permit access to its books, records and accounts by the contracting agency, the contract compliance officer, and the secretary of labor for purposes of investigation to ascertain compliance with the program;
- (j) To take such action, with respect to any subcontractor, as the city may direct as a means of enforcing the provisions of subparagraphs (a) through (m) herein, including penalties and sanctions for noncompliance, provided however that, in the event the Contractor becomes involved in or is threatened with litigation as a result of such direction by the city, the city will intervene in such litigation to the extent necessary to protect the interest of the city and to effectuate the city's equal employment opportunity program. In the case of contracts funded directly or indirectly, in whole or in part, under one (1) or more federal assistance programs, the Contractor or the city may ask the United States to enter into such litigation to protect the interest of the United States;
- (k) To file, along with its subcontractors, if any, compliance reports with the city and NHPA in the form and to the extent prescribed in the contract by the contract compliance director of the city. Compliance reports filed at such times as directed shall contain information as to the employment practices, policies, programs and statistics of the Contractor and its subcontractors, if any;
- (l) To include the provisions of subparagraphs (a) through (m) of this equal opportunity clause in every subcontract or purchase order so that said provisions will be binding upon each such subcontractor or vendor;
- (m) That a finding, as hereinafter provided of a refusal by the Contractor, or subcontractor, to comply with any portion of this program as herein stated and described, may subject the offending party to any or all of the penalties;
 - (1) Withholding of all future payments under the involved public contract to the Contractor in violation until it is determined that the Contractor, or subcontractor is in compliance with the provisions of the contract;
 - (2) Refusal of all future bids for any public contract with the city, or any of its departments or divisions, and NHPA until such time as the Contractor, or subcontractor, is in compliance with the provisions of the contract;
 - (3) Cancellation of the public contract;
 - (4) Recovery of specified monetary penalties;
 - (5) In case of substantial or material violation, or the threat or substantial or material violation, or the threat of substantial or material violation, of the compliance procedure or as may be provided for by contract, appropriate equitable or legal proceedings may be brought to enforce these provisions against contractors; subcontractors, or other organizations, individuals or groups who directly or indirectly are not in compliance with the policy as herein outlined.

IN WITNESS HEREOF on the _____ day of _____, 20_____,
the Contractor has caused this Agreement to be duly executed as of the day and year first above written.

WITNESS

Contractor name

Signature

Date

STATEMENT OF ITEMS TO BE DISCUSSED BY THE PROPOSER

PARKING ACCESS & REVENUE CONTROL SYSTEM REPLACEMENT AT NEW HAVEN PARKING AUTHORITY FACILITIES NEW HAVEN, CONNECTICUT NHPA PROJECT #24-029

Proposer's Name: _____

The Proposer shall include in its Proposal the following information, as a minimum, regarding the proposed services for Parking Access & Revenue Control System Replacement at New Haven Parking Authority Facilities. If necessary, questions may be answered on separate, attached sheets. The Proposer may submit any additional information as applicable and/or desired.

1. Describe in detail the Proposer's approach to accomplishing the work. Elaborate on the individual tasks as well as phasing and sequencing.

2. Describe the organizational structure under which the proposed services will be performed and identify and describe key personnel.

3. Discuss specific experience with working in active public parking garages.

3. Discuss specific experience with providing project management for similar projects. Also, discuss what the various items include in project management and how this will be carried out. Identify if project management will be performed in-house or by a sub-consultant/sub-contractor.

Proposer's Name: _____

4. Discuss history of, and proposed plans for, use of subcontractors (if any) and associated use of MBE/WBE/DisBEs,
5. Discuss the proposed time schedule and timeline for completing the proposed services. Include details such as engineering, fabrication, and delivery; installation; sequencing; working at multiple facilities. **NOTE: Only one entry/exit point is allowed out of service per facility at a time but Contractor may work on multiple facilities at a time.** Traffic must be maintained to and from the facility at all times, even for situations where there is only one entry/exit point.
6. Discuss your ability to service, maintain, construct and repair the PARCS systems in use by New Haven Parking Authority and describe in detail your ability to obtain and provide quality, compatible repair and replacement parts, especially for those parts that are manufactured by other companies.
7. Describe your inventory of repair and replacement parts and how long it takes for you to obtain parts not in stock.
8. How many service technicians are stationed in New Haven during both peak and off-peak times?

Proposer's Name:_____

9. How many entry and exit lanes do you service in a) New Haven area and b) company-wide; and what is the ratio of service technicians servicing in New Haven versus the number of serviced in New Haven and company-wide?
10. How many maintenance supervisors do you have available for the New Haven area?
11. Discuss your response time for calls for service both during peak and off-peak times.
12. Describe your procedure handling routine as well as urgent repair calls.
13. Describe what reports, notification and monthly summaries you propose to provide in carrying out these services.
14. Describe in detail what repair and preventive maintenance service you propose to provide as standard and your proposed schedule/frequency for carrying out these services. Also, describe what services are not standard, and require additional compensation.

Proposer's Name:_____

15. Discuss in detail and per each facility the fees associated with your providing the PARCS repair and preventive maintenance services.
16. What are your standard hourly compensation rates for your service personnel, including regular and overtime situations?
17. Discuss any options or cost savings you may offer.
18. Note any exceptions to the draft form of Service Agreement.

Name of Bidder

COMMUNITY SUBCONTRACTOR UTILIZATION CERTIFICATE

The undersigned, having read the Bid Documents and the requirements regarding the naming of subcontractors and the use of DAS-Certified Small (SBE) and Minority Business Enterprises (including Minority owned Business Enterprises (MBE), Women owned Business Enterprises (WBE), and/or Disabled owned Business Enterprises (DisBE)), and the use of businesses having a place of business within the City of New Haven, hereby provides the following assurance of compliance. As of the date of the bid opening, the Bidder shall achieve this requirement as follows (attach additional sheets if necessary):

SUBCONTRACTOR* / SUPPLIER**	ENTERPRISE CATEGORY	NATURE OF WORK	DOLLAR AMOUNT

Name:	☐ DAS-certified SBE (non-MBE/WBE/DisBE)		
	☐ DAS-certified MBE		
Address:	☐ DAS-certified WBE		
	☐ DAS-certified DisBE		
Contact Person:	☐ All other subcontractors		
Phone # / Email address:			

Name:	☐ DAS-certified SBE (non-MBE/WBE/DisBE)		
	☐ DAS-certified MBE		
Address:	☐ DAS-certified WBE		
	☐ DAS-certified DisBE		
Contact Person:	☐ All other subcontractors		
Phone # / Email address:			

Name:	☐ DAS-certified SBE (non-MBE/WBE/DisBE)		
	☐ DAS-certified MBE		
Address:	☐ DAS-certified WBE		
	☐ DAS-certified DisBE		
Contact Person:	☐ All other subcontractors		
Phone # / Email address:			

Name:	☐ DAS-certified SBE (non-MBE/WBE/DisBE)		
	☐ DAS-certified MBE		
Address:	☐ DAS-certified WBE		
	☐ DAS-certified DisBE		
Contact Person:	☐ All other subcontractors		
Phone # / Email address:			

Name:	☐ DAS-certified SBE (non-MBE/WBE/DisBE)		
	☐ DAS-certified MBE		
Address:	☐ DAS-certified WBE		
	☐ DAS-certified DisBE		
Contact Person:	☐ All other subcontractors		
Phone # / Email address:			

*Note: This form is for listing Subcontractors and Suppliers of Materials. In the event the Prime Contractor/General Contractor is a SBE, MBE, WBE or DisBE, its status as such does NOT contribute to the SBE, MBE, WBE and DisBE subcontractor requirements.

** For Suppliers of Materials, list only those Suppliers for which the Bidder will use in order to satisfy the requirement for use of Small and Minority Business Enterprises. Label in the Nature of Work section as supplier of the specific material to be supplied.

CONTINUED:

Name of Bidder

SUBCONTRACTOR / SUPPLIER*	ENTERPRISE CATEGORY	NATURE OF WORK	DOLLAR AMOUNT

Name:	☐ DAS-certified SBE (non-MBE/WBE/DisBE)
	☐ DAS-certified MBE
Address:	☐ DAS-certified WBE
	☐ DAS-certified DisBE
Contact Person:	☐ All other subcontractors
Phone # / Email address:	

Name:	☐ DAS-certified SBE (non-MBE/WBE/DisBE)
	☐ DAS-certified MBE
Address:	☐ DAS-certified WBE
	☐ DAS-certified DisBE
Contact Person:	☐ All other subcontractors
Phone # / Email address:	

Name:	☐ DAS-certified SBE (non-MBE/WBE/DisBE)
	☐ DAS-certified MBE
Address:	☐ DAS-certified WBE
	☐ DAS-certified DisBE
Contact Person:	☐ All other subcontractors
Phone # / Email address:	

Name:	☐ DAS-certified SBE (non-MBE/WBE/DisBE)
	☐ DAS-certified MBE
Address:	☐ DAS-certified WBE
	☐ DAS-certified DisBE
Contact Person:	☐ All other subcontractors
Phone # / Email address:	

Name:	☐ DAS-certified SBE (non-MBE/WBE/DisBE)
	☐ DAS-certified MBE
Address:	☐ DAS-certified WBE
	☐ DAS-certified DisBE
Contact Person:	☐ All other subcontractors
Phone # / Email address:	

*Note: This form is for listing Subcontractors and Suppliers of Materials. In the event the Prime Contractor/General Contractor is a SBE, MBE, WBE or DisBE, its status as such does NOT contribute to the SBE, MBE, WBE and DisBE subcontractor requirements.

** For Suppliers of Materials, list only those Suppliers for which the Bidder will use in order to satisfy the requirement for use of Small and Minority Business Enterprises. Label in the Nature of Work section as supplier of the specific material to be supplied.

Name of Bidder

COMMUNITY SUBCONTRACTOR UTILIZATION CERTIFICATE [CONTINUED]

SUBCONTRACTOR/SUPPLIER NAME

BRIEF STATEMENT OF EXPERIENCE

REFERENCES

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Name of Bidder	

COMMUNITY SUBCONTRACTOR UTILIZATION CERTIFICATE [CONTINUED]

SUBCONTRACTOR / SUPPLIER NAME

BRIEF STATEMENT OF EXPERIENCE

REFERENCES

CALCULATION SHEET FOR COMMUNITY SUBCONTRACTOR UTILIZATION CERTIFICATE

(A) Total Dollar Amount for All MBE, WBE and DisBE = \$_____

(B) Total Dollar Amount for All SBE (non-MBE/WBE/DisBE), MBE, WBE and DisBE = \$_____

(C) Total Dollar Amount for Businesses having a place of business within the City of New Haven limits*** = \$_____

(D) Total Dollar Amount for Bidder's Entire Contract Value (The "Bid Price") = \$_____

*** Note: If the Bidder (i.e., prime bidder) has a place of business within the City of New Haven limits, then the relevant dollar amount is calculated by deducting from the Bidder's entire contract value, the value of the subcontracts and suppliers of materials who do not have a place of business within the City of New Haven.

Minority Business Enterprises Utilization Calculation for Percentage of Total Contract Value:

1. (A) Divided By (D) x 100 = _____% (Percentage of MBE, WBE and DisBE Participation) **NOTE: Must be no less than 25%.**

Small Business Enterprises Utilization Calculation for Percentage of Total Contract Value:

2. (B) Divided By (D) x 100 = _____% (Percentage of SBE Participation) **NOTE: Must be no less than 30%.**

New Haven Business Enterprises Utilization Calculation for Percentage of Total Contract Value:

3. (C) Divided By (D) x 100 = _____% (Percentage of New Haven Businesses) **NOTE: Must be no less than 10%.**

The Bidder further certifies that none of the SBE/MBE/WBE/DisBE Subcontractors or Suppliers of Materials that the Bidder has selected for participation in the NHPA Community Subcontractor Utilization Program fall within the definition of an Affiliated party pursuant to Connecticut State Statute Section 4a-60g. Additionally, the Bidder further certifies that, upon approval of the above-named firms, or other firms added or substituted in accordance with the Bid Documents, it will execute a binding contract with such subcontractors and suppliers of materials for the purpose of undertaking and completing the above described work.

Date:_____

Name of Bidder: _____

Official Address:_____

Name and Title of Signatory:_____

Signature:_____

Affix Corporate Seal
(Attach additional sheets if necessary)

NEW HAVEN PARKING AUTHORITY
CERTIFICATE OF NON ARREARAGE

STATE OF)
) ss
COUNTY OF)

_____ being duly
sworn deposes and says:

1. S/he is the (owner, partner, officer, representative,
or agent) of _____ the
Bidder that has submitted the attached Bid.

2. Neither the Bidder, nor its subcontractors are in
arrears to the State of Connecticut Second Injury Fund.

(signed) _____

(Title)

Subscribed and sworn to before me this _____ day of
_____, _____.

Notary Public/Commissioner
of the Superior Court

CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION

CONTRACTORS WAGE CERTIFICATION FORM

I, _____ of _____
Officer, Owner, Authorized Rep. Company Name

do hereby certify that the _____
Company Name

Street

City

and all of its subcontractors will pay all workers on the

Project Name and Number

Street and City

the wages as listed in the schedule of prevailing rates required for such project (a copy of which is attached hereto).

Signed

Subscribed and sworn to before me this _____ day of _____,

Notary Public

 Return to:

Ijeoma Moneke (IJ)
Director of Revenue Control
New Haven Parking Authority
232 George Street
New Haven CT 06510



THIS IS A PUBLIC WORKS PROJECT

Covered by the

PREVAILING WAGE LAW

CT General Statutes Section 31-53

**If you have QUESTIONS regarding your wages
CALL (860) 263-6790**

Section 31-55 of the CT State Statutes requires every contractor or subcontractor performing work for the state to post in a prominent place the prevailing wages as determined by the Labor Commissioner.

3f) Terrazzo Mechanics & Marble Setters	40.6	34.93
-----LABORERS-----		
4) Group 1: General laborers, carpenter tenders, concrete specialists, wrecking laborers and fire watchers.	35.7	28.85
4) Group 1a: Acetylene Burners (Hours worked with a torch)	36.7	28.85
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofers/mixer/nozzleman (Person running mixer and spraying fireproof only).	35.95	28.85
4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	36.2	28.85
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections).	36.7	28.85
4d) Group 5: Air track operator, sand blaster and hydraulic drills.	36.45	28.85
4e) Group 6: Blasters, nuclear and toxic waste removal.	38.7	28.85
4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	38.7	28.85
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	36.2	28.85

4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	35.7	28.85
4i) Group 10: Traffic Control Signalman	21.42	28.85
4j) Group 11: Toxic Waste Removers A or B With PPE	38.7	28.85
5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	42.03	29.19
5a) Millwrights	43.25	29.13
5b) Carpenter - Welder	42.53	29.19
5c) Carpenter: Working with creosote lumber or acid	43.03	29.19
6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	46.4	36.66+3% of gross wage
7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	66.72	38.435+a+b
-----OUTSIDE LINE CONSTRUCTION-----		
Groundman	30.87	13.91
Linemen/Cable Splicer	56.12	32.85
8) Glazier (Trade License required: FG-1,2)	43.13	26.50+ a

9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	45.25	43.62 + a

----OPERATORS----

Group 1: Crane Handling or Erecting Structural Steel or Stone; Hoisting Engineer (2 drums or over). (Trade License Required)	58.19	29.80 + a

Group 1a: Front End Loader (7 cubic yards or over); Work Boat 26 ft. and Over	53.33	29.80 + a

Group 2: Cranes (100 ton rate capacity and over); Bauer Drill/Caisson. (Trade License Required)	57.78	29.80 + a

Group 2a: Cranes (under 100 ton rated capacity).	56.79	29.80 + a

Group 2b: Excavator over 2 cubic yards; Pile Driver (\$3.00 premium when operator controls hammer)	52.92	29.80 + a

Group 3: Excavator; Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Finegrade. (slopes, shaping, laser or GPS, etc.). (Trade License Required)	51.92	29.80 + a

Group 4: Trenching Machines; Lighter Derrick; CMI Machine or Similar; Koehring Loader (Skooper); Goldhofer.	51.42	29.80 + a

Group 5: Specialty Railroad Equipment; Asphalt Spreader, Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24 mandrel).	50.63	29.80 + a

Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	50.63	29.80 + a

Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	50.22	29.80 + a
Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under mandrel).	49.77	29.80 + a
Group 8: Mechanic; Grease Truck Operator; Hydroblaster; Barrier Mover; Power Stone Spreader; Welding; Work Boat Under 26 ft.; Transfer Machine; Rigger Foreman.	49.25	29.80 + a
Group 9: Front End Loader (under 3 cubic yards); Skid Steer Loader regardless of attachments; (Bobcat or Similar); Forklift, Power Chipper; Landscape Equipment (including Hydroseeder); Vacuum Excavation Truck and Hydrovac Excavation Truck (27 HG pressure or greater).	48.67	29.80 + a
Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	45.96	29.80 + a
Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	45.96	29.80 + a
Group 12: Wellpoint Operator.	45.87	29.80 + a
Group 13: Compressor Battery Operator.	45.12	29.80 + a
Group 14: Elevator Operator; Tow Motor Operator (solid tire no rough terrain).	43.6	29.80 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	43.06	29.80 + a
Group 16: Maintenance Engineer.	42.2	29.80 + a

Group 17: Portable Asphalt Plant Operator; Portable Crusher Plant Operator; Portable Concrete Plant Operator; Portable Grout Plant Operator; Portable Water Filtration Plant Operator.	47.91	29.80 + a

Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (Minimum for any job requiring a CDL license); Rigger; Signalman.	44.7	29.80 + a

Surveyor: Chief of Party	48.16	29.80 + a

Surveyor: Assistant Chief of Party	44.41	29.80 + a

Surveyor: Instrument Man	42.73	29.80 + a

Surveyor: Rodman or Chainman	36.78	29.80 + a

-----PAINTERS (Including Drywall Finishing)-----

10a) Brush and Roller	39.57	26.50

10b) Taping Only/Drywall Finishing	40.32	26.50

10c) Paperhanger and Red Label	40.07	26.50

10d) Spray	42.57	26.50

10e) Spray Helper	40.57	26.50

10f) Blast	44.57	26.50

10g) Blast Helper	40.57	26.50
11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	50.58	36.30
12) Well Digger, Pile Testing Machine	37.26	24.05 + a
Roofer: Cole Tar Pitch	46.0	24.74 + a
Roofer: Slate, Tile, Composition, Shingles, Singly Ply and Damp/Waterproofing	44.5	24.74 + a
15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	44.7	44.38
16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	50.58	36.30
-----TRUCK DRIVERS-----		
17) Block Truck	37.48	32.68 + a
17a) 2 Axle	36.16	32.68 + a
17ab) Helpers	34.66	32.68 + a
17b) 3 Axle, 2 Axle Mixer	36.27	32.68 + a

17c) 3 Axle Mixer	36.33	32.68 + a
17d) 4 Axle	36.39	32.68 + a
17e) 4 Axle Mixer	37.19	32.68 + a
17ef) 5 Axle	36.39	32.68 + a
17eg) 5 Axle Mixer	37.19	32.68 + a
17f) Heavy Duty Trailer (40 Tons and Over)	38.66	32.68 + a
17g) Euclids and Semi-Trailer	36.44	32.68 + a
17h) Heavy Duty Trailer up to 40 tons	37.39	32.68 + a
17i) Snorkle Truck	36.54	32.68 + a
17j) Swivel Dump and Tack Truck	36.39	32.68 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	53.76	33.44 + a
19) Theatrical Stage Journeyman	25.76	7.34

Welders: Rate for craft to which welding is incidental.

Surveyors: Hazardous material removal: \$3.00 per hour premium.

*Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.

**Note: Hazardous waste premium \$3.00 per hour over classified rate.

Truck Drivers: Trainers Premium: \$3.00 over wage rate.

Truck Drivers: Night Premium - Mixer Drivers: \$2.00 over wage rate.

As of: August 14, 2025

Crane with 150 ft. boom (including jib) - \$1.50 extra
Crane with 200 ft. boom (including jib) - \$2.50 extra
Crane with 250 ft. boom (including jib) - \$5.00 extra
Crane with 300 ft. boom (including jib) - \$7.00 extra
Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyman instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page:

www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

Sec. 31-53b. Construction safety and health course. New miner training program. Proof of completion required for mechanics, laborers and workers on public works projects. Enforcement. Regulations. Exceptions. (a) Each contract for a public works project entered into on or after July 1, 2009, by the state or any of its agents, or by any political subdivision of the state or any of its agents, described in subsection (g) of section 31-53, shall contain a provision requiring that each contractor furnish proof with the weekly certified payroll form for the first week each employee begins work on such project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53 on such public works project, pursuant to such contract, has completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

(b) Any person required to complete a course or program under subsection (a) of this section who has not completed the course or program shall be subject to removal from the worksite if the person does not provide documentation of having completed such course or program by the fifteenth day after the date the person is found to be in noncompliance. The Labor Commissioner or said commissioner's designee shall enforce this section.

(c) Not later than January 1, 2009, the Labor Commissioner shall adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of subsections (a) and (b) of this section. Such regulations shall require that the ten-hour construction safety and health courses required under subsection (a) of this section be conducted in accordance with federal Occupational Safety and Health Administration Training Institute standards, or in accordance with Federal Mine Safety and Health Administration Standards or in accordance with 29 CFR 1910.268, as appropriate. The Labor Commissioner shall accept as sufficient proof of compliance with the provisions of subsection (a) or (b) of this section a student course completion card issued by the federal Occupational Safety and Health Administration Training Institute, or such other proof of compliance said commissioner deems appropriate, dated no earlier than five years before the commencement date of such public works project.

(d) This section shall not apply to employees of public service companies, as defined in section 16-1, or drivers of commercial motor vehicles driving the vehicle on the public works project and delivering or picking up cargo from public works projects provided they perform no labor relating to the project other than the loading and unloading of their cargo.

(P.A. 06-175, S. 1; P.A. 08-83, S. 1.)

History: P.A. 08-83 amended Subsec. (a) by making provisions applicable to public works project contracts entered into on or after July 1, 2009, replacing provision re total cost of work with reference to Sec. 31-53(g), requiring proof in certified payroll form that new mechanic, laborer or worker has completed a 10-hour or more construction safety course and adding provision re new miner training program, amended Subsec. (b) by substituting "person" for "employee" and adding "or program", amended Subsec. (c) by adding "or in accordance with Federal Mine Safety and Health Administration Standards" and setting new deadline of January 1, 2009, deleted former Subsec. (d) re "public building", added new Subsec. (d) re exemptions for public service company employees and delivery drivers who perform no labor other than delivery and made conforming and technical changes, effective January 1, 2009.

Informational Bulletin

THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE

(applicable to public building contracts entered into *on or after July 1, 2007*, where the total cost of all work to be performed is at least \$100,000)

- (1) This requirement was created by Public Act No. 06-175, which is codified in Section 31-53b of the Connecticut General Statutes (pertaining to the prevailing wage statutes);
- (2) The course is required for public building construction contracts (projects funded in whole or in part by the state or any political subdivision of the state) entered into on or after July 1, 2007;
- (3) It is required of private employees (not state or municipal employees) and apprentices who perform manual labor for a general contractor or subcontractor on a public building project where the total cost of all work to be performed is at least \$100,000;
- (4) The ten-hour construction course pertains to the ten-hour Outreach Course conducted in accordance with federal OSHA Training Institute standards, and, for telecommunications workers, a ten-hour training course conducted in accordance with federal OSHA standard, 29 CFR 1910.268;
- (5) The internet website for the federal OSHA Training Institute is http://www.osha.gov/fso/ote/training/edcenters/fact_sheet.html;
- (6) The statutory language leaves it to the contractor and its employees to determine who pays for the cost of the ten-hour Outreach Course;
- (7) Within 30 days of receiving a contract award, a general contractor must furnish proof to the Labor Commissioner that all employees and apprentices performing manual labor on the project will have completed such a course;
- (8) Proof of completion may be demonstrated through either: (a) the presentation of a *bona fide* student course completion card issued by the federal OSHA Training Institute; or (2) the presentation of documentation provided to an employee by a trainer certified by the Institute pending the actual issuance of the completion card;
- (9) Any card with an issuance date more than 5 years prior to the commencement date of the construction project shall not constitute proof of compliance;

- (10) Each employer shall affix a copy of the construction safety course completion card to the certified payroll submitted to the contracting agency in accordance with Conn. Gen. Stat. § 31-53(f) on which such employee's name first appears;
- (11) Any employee found to be in non-compliance shall be subject to removal from the worksite if such employee does not provide satisfactory proof of course completion to the Labor Commissioner by the fifteenth day after the date the employee is determined to be in noncompliance;
- (12) Any such employee who is determined to be in noncompliance may continue to work on a public building construction project for a maximum of fourteen consecutive calendar days while bringing his or her status into compliance;
- (13) The Labor Commissioner may make complaint to the prosecuting authorities regarding any employer or agent of the employer, or officer or agent of the corporation who files a false certified payroll with respect to the status of an employee who is performing manual labor on a public building construction project;
- (14) The statute provides the minimum standards required for the completion of a safety course by manual laborers on public construction contracts; any contractor can exceed these minimum requirements; and
- (15) Regulations clarifying the statute are currently in the regulatory process, and shall be posted on the CTDOL website as soon as they are adopted in final form.
- (16) Any questions regarding this statute may be directed to the Wage and Workplace Standards Division of the Connecticut Labor Department via the internet website of <http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm>; or by telephone at (860)263-6790.

THE ABOVE INFORMATION IS PROVIDED EXCLUSIVELY AS AN EDUCATIONAL RESOURCE, AND IS NOT INTENDED AS A SUBSTITUTE FOR LEGAL INTERPRETATIONS WHICH MAY ULTIMATELY ARISE CONCERNING THE CONSTRUCTION OF THE STATUTE OR THE REGULATIONS.

November 29, 2006

Notice
**To All Mason Contractors and Interested Parties
Regarding Construction Pursuant to Section 31-53 of the
Connecticut General Statutes (Prevailing Wage)**

The Connecticut Labor Department Wage and Workplace Standards Division is empowered to enforce the prevailing wage rates on projects covered by the above referenced statute.

Over the past few years the Division has withheld enforcement of the rate in effect for workers who operate a forklift on a prevailing wage rate project due to a potential jurisdictional dispute.

The rate listed in the schedules and in our Occupational Bulletin (see enclosed) has been as follows:

Forklift Operator:

- **Laborers (Group 4) Mason Tenders** - operates forklift solely to assist a mason to a maximum height of nine feet only.
- **Power Equipment Operator (Group 9)** - operates forklift to assist any trade and to assist a mason to a height over nine feet.

The U.S. Labor Department conducted a survey of rates in Connecticut but it has not been published and the rate in effect remains as outlined in the above Occupational Bulletin.

Since this is a classification matter and not one of jurisdiction, effective January 1, 2007 the Connecticut Labor Department will enforce the rate on each schedule in accordance with our statutory authority.

Your cooperation in filing appropriate and accurate certified payrolls is appreciated.

Information Bulletin

Occupational Classifications

The Connecticut Department of Labor has the responsibility to properly determine "job classification" on prevailing wage projects covered under C.G.S. Section 31-53(d).

Note: This information is intended to provide a sample of some occupational classifications for guidance purposes only. It is not an all-inclusive list of each occupation's duties. This list is being provided only to highlight some areas where a contractor may be unclear regarding the proper classification. If unsure, the employer should seek guidelines for CTDOL.

Below are additional clarifications of specific job duties performed for certain classifications:

- **ASBESTOS WORKERS**

Applies all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.

- **ASBESTOS INSULATOR**

Handle, install apply, fabricate, distribute, prepare, alter, repair, dismantle, heat and frost insulation, including penetration and fire stopping work on all penetration fire stop systems.

- **BOILERMAKERS**

Erects hydro plants, incomplete vessels, steel stacks, storage tanks for water, fuel, etc. Builds incomplete boilers, repairs heat exchanges and steam generators.

- **BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, MARBLE MASONS, PLASTERERS, STONE MASONS, PLASTERERS. STONE MASONS, TERRAZZO WORKERS, TILE SETTERS**

Lays building materials such as brick, structural tile and concrete cinder, glass, gypsum, terra cotta block. Cuts, tools and sets marble, sets stone, finishes concrete, applies decorative steel, aluminum and plastic tile, applies cements, sand, pigment and marble chips to floors, stairways, etc.

- **CARPENTERS, MILLWRIGHTS. PILEDRIVMEN. LATHERS. RESILEINT FLOOR LAYERS, DOCK BUILDERS, DIKERS, DIVER TENDERS**

Constructs, erects, installs and repairs structures and fixtures of wood, plywood and wallboard. Installs, assembles, dismantles, moves industrial machinery. Drives piling into ground to provide foundations for structures such as buildings and bridges, retaining walls for earth embankments, such as cofferdams. Fastens wooden, metal or rockboard lath to walls, ceilings and partitions of buildings, acoustical tile layer, concrete form builder. Applies firestopping materials on fire resistive joint systems only. Installation of curtain/window walls only where attached to wood or metal studs. Installation of insulated material of all types whether blown, nailed or attached in other ways to walls, ceilings and floors of buildings. Assembly and installation of modular furniture/furniture systems. Free-standing furniture is not covered. This includes free standing: student chairs, study top desks, book box desks, computer furniture, dictionary stand, atlas stand, wood shelving, two-position information access station, file cabinets, storage cabinets, tables, etc.

- **LABORER, CLEANING**

- The clean up of any construction debris and the general (heavy/light) cleaning, including sweeping, wash down, mopping, wiping of the construction facility and its furniture, washing, polishing, and dusting.

- **DELIVERY PERSONNEL**

- If delivery of supplies/building materials is to one common point and stockpiled there, prevailing wages are not required. If the delivery personnel are involved in the distribution of the material to multiple locations within the construction site then they would have to be paid prevailing wages for the type of work performed: laborer, equipment operator, electrician, ironworker, plumber, etc.

- An example of this would be where delivery of drywall is made to a building and the delivery personnel distribute the drywall from one "stockpile" location to further sub-locations on each floor. Distribution of material around a construction site is the job of a laborer or tradesman, and not a delivery personnel.

- **ELECTRICIANS**

Install, erect, maintenance, alteration or repair of any wire, cable, conduit, etc., which generates, transforms, transmits or uses electrical energy for light, heat, power or other purposes, including the Installation or maintenance of telecommunication, LAN wiring or computer equipment, and low voltage wiring. ****License required per Connecticut General Statutes: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9.***

- **ELEVATOR CONSTRUCTORS**

Install, erect, maintenance and repair of all types of elevators, escalators, dumb waiters and moving walks. **License required by Connecticut General Statutes: R-1,2,5,6.*

- **FORK LIFT OPERATOR**

Laborers Group 4) Mason Tenders - operates forklift solely to assist a mason to a maximum height of nine (9) feet only.

Power Equipment Operator Group 9 - operates forklift to assist any trade, and to assist a mason to a height over nine (9) feet.

- **GLAZIERS**

Glazing wood and metal sash, doors, partitions, and 2 story aluminum storefronts. Installs glass windows, skylights, store fronts and display cases or surfaces such as building fronts, interior walls, ceilings and table tops and metal store fronts. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers, which require equal composite workforce.

- **IRONWORKERS**

Erection, installation and placement of structural steel, precast concrete, miscellaneous iron, ornamental iron, metal curtain wall, rigging and reinforcing steel. Handling, sorting, and installation of reinforcing steel (rebar). Metal bridge rail (traffic), metal bridge handrail, and decorative security fence installation. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers which require equal composite workforce.

- **INSULATOR**

- Installing fire stopping systems/materials for "Penetration Firestop Systems": transit to cables, electrical conduits, insulated pipes, sprinkler pipe penetrations, ductwork behind radiation, electrical cable trays, fire rated pipe penetrations, natural polypropylene, HVAC ducts, plumbing bare metal, telephone and communication wires, and boiler room ceilings.

- **LABORERS**

Acetylene burners, asphalt rakers, chain saw operators, concrete and power buggy operator, concrete saw operator, fence and guard rail erector (except metal bridge rail (traffic), decorative security fence (non-metal)).

installation.), hand operated concrete vibrator operator, mason tenders, pipelayers (installation of storm drainage or sewage lines on the street only), pneumatic drill operator, pneumatic gas and electric drill operator, powermen and wagon drill operator, air track operator, block paver, curb setters, blasters, concrete spreaders.

- **PAINTERS**

Maintenance, preparation, cleaning, blasting (water and sand, etc.), painting or application of any protective coatings of every description on all bridges and appurtenances of highways, roadways, and railroads. Painting, decorating, hardwood finishing, paper hanging, sign writing, scenic art work and drywall hhg for any and all types of building and residential work.

- **LEAD PAINT REMOVAL**

- Painter's Rate

1. Removal of lead paint from bridges.
2. Removal of lead paint as preparation of any surface to be repainted.
3. Where removal is on a Demolition project prior to reconstruction.

- Laborer's Rate

1. Removal of lead paint from any surface NOT to be repainted.
2. Where removal is on a *TOTAL* Demolition project only.

- **PLUMBERS AND PIPEFITTERS**

Installation, repair, replacement, alteration or maintenance of all plumbing, heating, cooling and piping. **License required per Connecticut General Statutes: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2 S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4.*

- **POWER EQUIPMENT OPERATORS**

Operates several types of power construction equipment such as compressors, pumps, hoists, derricks, cranes, shovels, tractors, scrapers or motor graders, etc. Repairs and maintains equipment. **License required, crane operators only, per Connecticut General Statutes.*

- **ROOFERS**

Covers roofs with composition shingles or sheets, wood shingles, slate or asphalt and gravel to waterproof roofs, including preparation of surface. (demolition or removal of any type of roofing and or clean-up of any and all areas where a roof is to be relaid.)

- **SHEETMETAL WORKERS**

Fabricate, assemble, install and repair sheetmetal products and equipment in such areas as ventilation, air-conditioning, warm air heating, restaurant equipment, architectural sheet metal work, sheetmetal roofing, and aluminum gutters. Fabrication, handling, assembling, erecting, altering, repairing, etc. of coated metal material panels and composite metal material panels when used on building exteriors and interiors as soffits, fascia, louvers, partitions, canopies, cornice, column covers, awnings, beam covers, cladding, sun shades, lighting troughs, spires, ornamental roofing, metal ceilings, mansards, copings, ornamental and ventilation hoods, vertical and horizontal siding panels, trim, etc. The sheet metal classification also applies to the vast variety of coated metal material panels and composite metal material panels that have evolved over the years as an alternative to conventional ferrous and non-ferrous metals like steel, iron, tin, copper, brass, bronze, aluminum, etc. Fabrication, handling, assembling, erecting, altering, repairing, etc. of architectural metal roof, standing seam roof, composite metal roof, metal and composite bathroom/toilet partitions, aluminum gutters, metal and composite lockers and shelving, kitchen equipment, and walk-in coolers. To include testing and air –balancing ancillary to installation and construction.

- **SPRINKLER FITTERS**

Installation, alteration, maintenance and repair of fire protection sprinkler systems.

****License required per Connecticut General Statutes: F-1,2,3,4.***

- **TILE MARBLE AND TERRAZZO FINISHERS**

Assists and tends the tile setter, marble mason and terrazzo worker in the performance of their duties.

- **TRUCK DRIVERS**

~How to pay truck drivers delivering asphalt is under REVISION~

Truck Drivers are required to be paid prevailing wage for time spent "working" directly on the site. These drivers remain covered by the prevailing wage for any time spent transporting between the actual construction location and facilities (such as fabrication, plants, mobile factories, batch plant, borrow pits, job headquarters, tool yards, etc.) dedicated exclusively, or nearly so, to performance of the contract or project, which are so located in proximity to the actual construction location that it is reasonable to include them. ****License required, drivers only, per Connecticut General Statutes.***

For example:

- Material men and deliverymen are not covered under prevailing wage as long as they are not directly involved in the construction process. If, they unload the material, they would then be covered by prevailing wage for the classification they are performing work in: laborer, equipment operator, etc.
- Hauling material off site is not covered provided they are not dumping it at a location outlined above.
- Driving a truck on site and moving equipment or materials on site would be considered covered work, as this is part of the construction process.

➤ *Any questions regarding the proper classification should be directed to:*
Public Contract Compliance Unit
Wage and Workplace Standards Division
Connecticut Department of Labor
200 Folly Brook Blvd, Wethersfield, CT 06109
(860) 263-6790.

STATUTE 31-55a

- SPECIAL NOTICE -

To: All State and Political Subdivisions, Their Agents, and Contractors

Connecticut General Statute 31-55a - Annual adjustments to wage rates by contractors doing state work.

Each contractor that is awarded a contract on or after October 1, 2002, for (1) the construction of a state highway or bridge that falls under the provisions of section 31-54 of the general statutes, or (2) the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project that falls under the provisions of section 31-53 of the general statutes shall contact the Labor Commissioner on or before July first of each year, for the duration of such contract, to ascertain the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done, and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee, effective each July first.

- The prevailing wage rates applicable to any contract or subcontract awarded on or after October 1, 2002 are subject to annual adjustments each July 1st for the duration of any project which was originally advertised for bids on or after October 1, 2002.
- Each contractor affected by the above requirement shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.
- It is the **contractor's** responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's Web Site. The annual adjustments will be posted on the Department of Labor Web page: www.ctdol.state.ct.us. For those without internet access, please contact the division listed below.
- The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project. All subsequent annual adjustments will be posted on our Web Site for contractor access.

Any questions should be directed to the Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Blvd., Wethersfield, CT 06109 at (860)263-6790.

[New] In accordance with Section 31-53b(a) of the C.G.S. each contractor shall provide a copy of the OSHA 10 Hour Construction Safety and Health Card for each employee, to be attached to the first certified payroll on the project.

In accordance with Connecticut General Statutes, 31-53 Certified Payrolls with a statement of compliance shall be submitted monthly to the contracting agency.												PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS										Connecticut Department of Labor Wage and Workplace Standards Division 200 Folly Brook Blvd. Wethersfield, CT 06109																									
CONTRACTOR NAME AND ADDRESS:												SUBCONTRACTOR NAME & ADDRESS						WORKER'S COMPENSATION INSURANCE CARRIER POLICY # EFFECTIVE DATE: EXPIRATION DATE:																													
PAYROLL NUMBER		Week-Ending Date		PROJECT NAME & ADDRESS																																											
PERSON/WORKER, ADDRESS and SECTION		APPR RATE %	MALE/ FEMALE AND RACE*	WORK CLASSIFICATION		DAY AND DATE						Total ST Hours	BASE HOURLY RATE	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS				GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY																										
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***FRINGE BENEFITS EXPLANATION (P):**

Bona fide benefits paid to approved plans, funds or programs, except those required by Federal or State Law (unemployment tax, worker’s compensation, income taxes, etc.).

Please specify the type of benefits provided:

- 1) Medical or hospital care _____
- 4) Disability _____
- 2) Pension or retirement _____
- 5) Vacation, holiday _____
- 3) Life Insurance _____
- 6) Other (please specify) _____

CERTIFIED STATEMENT OF COMPLIANCE

For the week ending date of _____,

I, _____ of _____, (hereafter known as Employer) in my capacity as _____ (title) do hereby certify and state:

Section A:

1. All persons employed on said project have been paid the full weekly wages earned by them during the week in accordance with Connecticut General Statutes, section 31-53, as amended. Further, I hereby certify and state the following:

a) The records submitted are true and accurate;

b) The rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as defined in Connecticut General Statutes, section 31-53 (h), are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection Connecticut General Statutes, section 31-53 (d), and said wages and benefits are not less than those which may also be required by contract;

c) The Employer has complied with all of the provisions in Connecticut General Statutes, section 31-53 (and Section 31-54 if applicable for state highway construction);

d) Each such person is covered by a worker’s compensation insurance policy for the duration of his employment which proof of coverage has been provided to the contracting agency;

e) The Employer does not receive kickbacks, which means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided directly or indirectly, to any prime contractor, prime contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a prime contractor in connection with a subcontractor relating to a prime contractor; and

f) The Employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years or both.

2. OSHA~The employer shall affix a copy of the construction safety course, program or training completion document to the certified payroll required to be submitted to the contracting agency for this project on which such persons name first appears.

(Signature)

(Title)

Submitted on (Date)

Weekly Payroll Certification For Public Works Projects (Continued)				PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS										Week-Ending Date: Contractor or Subcontractor Business Name:					
WEEKLY PAYROLL																			
PERSON/WORKER, ADDRESS and SECTION	APPR RATE %	MALE/ FEMALE AND RACE*	WORK CLASSIFICATION	DAY AND DATE						Total ST Hours	BASE HOURLY RATE	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS				GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY
				S	M	T	W	TH	F	S									
			Trade License Type & Number - OSHA 10 Certification Number								Total O/T Hours			TOTAL FRINGE BENEFIT PLAN CASH					
				HOURS WORKED EACH DAY															
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PAGE NUMBER ____ OF																			

**Connecticut Department of Labor
Wage and Workplace Standards Division
FOOTNOTES**

- ⇒ Please Note: If the “Benefits” listed on the schedule for the following occupations includes a letter(s) (+ a or + a+b for instance), refer to the information below.

Benefits to be paid at the appropriate prevailing wage rate for the listed occupation.

If the “Benefits” section for the occupation lists only a dollar amount, disregard the information below.

Bricklayers, Cement Masons, Cement Finishers, Concrete Finishers, Stone Masons
(Building Construction) and
(Residential- Hartford, Middlesex, New Haven, New London and Tolland Counties)

- a. Paid Holiday: Employees shall receive 4 hours for Christmas Eve holiday provided the employee works the regularly scheduled day before and after the holiday. Employers may schedule work on Christmas Eve and employees shall receive pay for actual hours worked in addition to holiday pay.

Elevator Constructors: Mechanics

- a. Paid Holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Veterans’ Day, Thanksgiving Day, Christmas Day, plus the Friday after Thanksgiving.
- b. Vacation: Employer contributes 8% of basic hourly rate for 5 years or more of service or 6% of basic hourly rate for 6 months to 5 years of service as vacation pay credit.

Glaziers

- a. Paid Holidays: Labor Day and Christmas Day.

Power Equipment Operators
(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year’s Day, Good Friday, Memorial day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday. Holidays falling on Saturday may be observed on Saturday, or if the employer so elects, on the preceding Friday.

Ironworkers

- a. Paid Holiday: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

Laborers (Tunnel Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. No employee shall be eligible for holiday pay when he fails, without cause, to work the regular work day preceding the holiday or the regular work day following the holiday.

Roofers

- a. Paid Holidays: July 4th, Labor Day, and Christmas Day provided the employee is employed 15 days prior to the holiday.

Sprinkler Fitters

- a. Paid Holidays: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

Truck Drivers

(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas day, and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

PRELIMINARY PROGRESS SCHEDULE

Parking Access and Revenue Control System Replacement
at the Various Facilities
NHPA Project No. 24-029
New Haven, Connecticut

PROPOSED START DATE:

(ENTER THE DATE)

730 calendar days



Bid Items		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1.	General Provisions:																								
2.	Work related to the Air Rights Garage, Crown Street Garage, Temple Street Garage, Temple Medical Garage, 270 State Street Garage and Granite Square Garage																								
	Air Rights Parking Garage																								
	Crown Street Parking Garage																								
	Temple Street Parking Garage																								
	Temple Medical Parking Garage																								
	270 State Street Parking Garage																								
	Granite Sqaure Parking Garage																								
3.	Work related to the Union Station Parking Garage																								
4.	Work related to the Under Air Rights Surface Lot, Elm Orange Surface Lot, State Wall Surface Lot, State Fair Surface Lot, State trumbull Surface Lot, State Pulaski Surface Lot and Whalley Blake Surface Lot																								
	Under Air Rights Surface Lot																								
	Elm Orange Surface Lot																								
	State Wall Surface Lot																								
	State Fair Surface Lot																								
	State Trumbull Surface Lot																								
	State Pulsaski Surface Lot																								
	Whalley Blake Surface Lot																								
5.	Refurbishment of Booths																								
	Air Rights Parking Garage																								
	Crown Street Parking Garage																								
	Temple Street Parking Garage																								
	Temple Medical Parking Garage																								
	270 State Street Parking Garage																								
	Granite Sqaure Parking Garage																								
	Union Station Parking Garage																								
	Under Air Rights Surface Lot																								
	Repairs to the Ductwork																								
6	Traffic Control Provisions																								

HOURLY RATE SCHEDULE

The following are hourly wage rates for all tradesmen associated with this bid package for performing extra work on a time and material basis. These rates are fully loaded [including benefits, taxes (All Sales Taxes, Labor and Material as applicable for this project and type of work), applicable insurance, overhead and profit, bond costs (if Subcontractor has provided Surety Bonds), small tools, travel, parking, supervision , and any other costs associated with labor, etc.] and are in accordance with the prevailing wages of the trade having jurisdiction in areas where the work is performed. The wage rates shall be valid for the life of the project. NOTE: Further, no mark-up shall be allowed on the premium time portion of the wage rate. These wage rates including detail and supporting documentation shall be made available within 5 days of verbal award and shall be broken down sufficiently representing all of the items noted above. All rates are subject to thorough analysis and subject to reduction if deemed inaccurate by Turner Construction Company and/or The Owner.

Foremen	Straight Time	Time-and-a-Half	Double-Time
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
Journeyman	Straight Time	Time-and-a-Half	Double-Time
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
Apprentice	Straight Time	Time-and-a-Half	Double-Time
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____
_____	\$ _____	\$ _____	\$ _____

NEW HAVEN PARKING AUTHORITY

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____
as Principal hereinafter called Contractor, and _____

as Surety, hereinafter called Surety, are held and firmly
bound unto the New Haven Parking Authority as Obligee,
hereinafter called Obligee, in the amount of _____

(\$ _____), for the payment whereof
Contractor and Surety bind themselves, their heirs, executors,
administrators, successors and assigns, jointly and severally,
firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____
_____ entered into a contract with Obligee for _____

_____ which contract with all its terms, covenants, conditions and
stipulations is incorporated herein to form a part hereof as
fully as if said contract was recited at length herein.

NOW, THEREFORE, the condition of this obligation is such
that, if Contractor shall promptly and faithfully perform
said Contract, then this obligation shall be null and void;
otherwise it shall remain in full force and effect.

PROVIDED, that any alterations which may be made in the
terms of the Contract, or in the work to be done under it,
or the giving by the Obligee of any extension of time for
the performance of the Contract, or any other forbearance on
the part of either the Obligee or the Contractor to the
other shall not in any way release the Contractor and the
Surety, or either of any of them, their heirs, executors,
administrators, successors or assigns from their liability
hereunder, notice to the Surety of any such alterations,
extension or forbearance being hereby waived.

Whenever Contractor shall be, and declared by Obligee to be
in default under the Contract, the Obligee having performed
Obligee's obligations thereunder, the Surety may promptly
remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and
conditions, by another contractor acceptable to the
Obligee said other Contractor to act as an agent of the
Surety, or

2. Obtain a bid or bids for submission for completing the Contract in accordance with its terms and conditions, and upon determination by Obligee and Surety of the lowest responsible bidder, arrange for a contract between such a bidder and Obligee, and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price" as used in this paragraph, shall mean the total amount payable by Obligee to Contractor under the Contract and any amendments thereto, less the amount properly paid by Obligee to Contractor.

SIGNED AND SEALED this _____ day of _____,
A.D. _____.

IN THE PRESENCE OF:

(Principal of Contractor) (Seal)

(Title)

(Surety) (Seal)

By: _____
Attorney in Fact

NEW HAVEN PARKING AUTHORITY

ACKNOWLEDGEMENT OF SURETY COMPANY

State of _____)

County of _____)

City of _____)

On this _____ day of _____, _____
before me personally came _____ to
me known to be the person named in the above instrument and
who after being by me duly sworn, did depose and say that he
resides in _____, that he is
the _____ of the corporation
described in which is executed the above instrument, that he
knows the seal of said corporation that the seal affixed to
said instrument is such corporate seal, that it was so
affixed pursuant to a resolution of the Board of Directors
of said corporation, and that he signed his name by like
order.

Notary Public

MY COMMISSION EXPIRES: _____

(The Surety Company must append statement of its financial condition and a copy of the resolution authorizing the execution of bonds by officers of the company, and the power-of-attorney of the surety company's attorney-in-fact, authorized to act within the State of Connecticut).

NEW HAVEN PARKING AUTHORITY

LABOR AND MATERIAL BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____,
of the town of _____, County of _____,
State of _____, as Principal (hereinafter
called the Principal) and _____

_____ (a surety company authorized to
transact business in the State of Connecticut) as Surety
(hereinafter called the Surety) are held and firmly bound
unto the New Haven Parking Authority (hereinafter called the
Obligee) in the full penal sum of _____

(\$ _____), lawful money of the United States,
to be paid to said Obligee which payment will and truly be
made and done, the said Principal binds himself, his heirs,
executors, and administrators (or itself, its successors and
assigns) and the said Surety binds itself, its successors
and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has entered into a certain written
contract with said Obligee, dated _____ day of
_____, A.D. _____, which written contract
provides for _____

_____ which contract, with all of its terms, covenants, conditions
and stipulations is incorporated herein to form a part
hereof as fully as if said contract was recited at length
herein.

NOW, THEREFORE, the condition of this obligation is such
that, if the said Principal shall promptly pay for all
materials furnished and labor supplied or performed in the
prosecution of the work included in and under the aforesaid
contract, whether or not the material or labor enters into
and becomes a component part of the real asset, then this
obligation shall be null and void, otherwise it shall remain
and be in full force and effect.

PROVIDED, that any alterations which may be made in the
terms of the contract or in the work to be done under it, or
the giving by the Obligee of any extension of time for the
performance of the contract, or any other forbearance on the
part of either the Obligee or the Principal to the other
shall not in any way release the Principal and the Surety or
either or any of them, their heirs, executors, administrators,

successors or assigns from their liability hereunder, notice to the Surety of any such alterations, extension or forbearance being hereby waived.

Any party, whether a subcontractor or otherwise, who furnishes materials or supplies or performs labor or services in the prosecution of the work under said contract, and who is not paid therefore; may bring a suit on this bond in the name of the person suing, prosecute the same to a final judgment, and have execution thereon for such sum or sums as may be justly due.

This bond is furnished pursuant to Section 49-41 of the General Statutes of Connecticut, Revision of 1958.

SIGNED AND SEALED this _____ day of _____, A.D. _____

IN THE PRESENCE OF:

(Principal of Contractor) (Seal)

(Title)

(Surety) (Seal)

By: _____
Attorney-in-Fact

Attest:

NEW HAVEN PARKING AUTHORITY

ACKNOWLEDGEMENT OF SURETY COMPANY

State of _____)

County of _____)

City of _____)

On this _____ day of _____, _____
before me personally came _____ to
me known to be the person named in the above instrument and
who after being by me duly sworn, did depose and say that he
resides in _____, that he is
the _____ of the corporation
described in which is executed the above instrument, that he
knows the seal of said corporation that the seal affixed to
said instrument is such corporate seal, that it was so
affixed pursuant to a resolution of the Board of Directors
of said corporation, and that he signed his name by like
order.

Notary Public

MY COMMISSION EXPIRES: _____

(The Surety Company must append statement of its financial
condition and a copy of the resolution authorizing the
execution of bonds by officers of the company, and the
power-of-attorney of the surety company's attorney-in-fact,
authorized to act within the State of Connecticut).

**AGREEMENT
BY AND BETWEEN
NEW HAVEN PARKING AUTHORITY
AND**

**FOR
PARKING ACCESS & REVENUE CONTROL SYSTEM REPLACEMENT
AT
NEW HAVEN PARKING AUTHORITY FACILITIES
NEW HAVEN, CONNECTICUT**

NHPA CONTRACT # _____

NHPA PROJECT #24-029

THE AGREEMENT made effective on the _____ day of _____,
_____ by and between the New Haven Parking Authority, 232 George Street, New Haven,
CT 06510 (“NHPA”) and _____ (“_____”).

WITNESSETH, that NHPA and _____, for a price not to exceed
_____ Dollars and __ Cents (\$_____),
and considerations stated herein, mutually agree as follows:

ARTICLE 1. Statement of Work. _____ shall furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment and service, including utility and transportation service, and perform and complete in an efficient and workmanlike manner all work required for the _____ in strict accordance with the Contract Documents.

ARTICLE 2. Contract Price. NHPA will pay _____ up to the amount stated above for the performance of the Contract in current funds for the total quantities of work performed at the unit prices or lump sum prices stipulated in the bid for the several respective items of work completed and in-place, subject to additions and deductions as provided in the Contract Documents.

ARTICLE 3. Contract. The executed Contract Documents shall consist of the following, when and as applicable:

- a. This Agreement
- b. Addenda
- c. Special Notice to Proposers for Community Subcontracting Opportunities
- d. Invitation for Proposers
- e. Instructions to Proposers
- f. Proposal Forms
- g. General Conditions
- h. NHPA Community Subcontractor Utilization Program
- i. Special Conditions
- j. Technical Specifications
- k. Drawings
- l. Notice of Award
- m. City of New Haven Commission on Equal Opportunities Certificate of Compliance
- n. Insurance Certificates and Bonds
- o. Trade Contract Attachment
- p. Notice to Proceed

THIS AGREEMENT, together with other documents enumerated in this ARTICLE 3, which said other documents are as fully a part of the Contract as if thereto attached or herein repeated from the Contract between the parties hereto.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

ATTEST:

NEW HAVEN PARKING AUTHORITY*

By:_____

Its Chairman
(Duly Authorized)

*As to Union Station Campus only (Union Station Building, Union Station Garage, and State Street Station), pursuant to this Agreement, New Haven Parking Authority Acting as Station Manager, Parking Manager, and Brokerage Manager pursuant to the New Haven Union Station Campus, Lease, Operating and Funding Agreement and Management Agreement

ATTEST:

BY:_____

Its_____
(Duly Authorized)

RELEASE AND AGREEMENT TO HOLD HARMLESS

TO ALL PEOPLE TO WHOM THESE PRESENTS SHALL COME, GREETING:

KNOW YE, that _____
a Corporation organized and existing under the Laws of the State
of _____, having a principal place of business in the
Town of _____, County of _____,
and State of _____, hereinafter referred to as the
"Releasor", for and in the consideration of _____

_____ received to its full satisfaction from the New Haven Parking
Authority, hereinafter referred to as the "Releasee":

Does Hereby By These Presents for itself, its successors and
assigns, its subcontractors, employees, consultants, suppliers,
materialmen, agents and their respective successors and assigns,
remise, release and forever discharge said Releasee, its
successors and assigns, of any and all actions, suits, debts,
dues, sums of money, accounts, reckonings, bonds, bills,
specialties, covenants, contracts, controversies, agreements,
promises, variances, trespasses, mechanics' lien rights, damages,
judgments, extents, executions, claims and demands whatsoever in
law or in equity which it has or ought to have or which it ever
had or ought to have had, known or unknown, discovered or
undiscovered, by reason or any matter, cause or thing whatsoever
against said Releasee arising out of or in any connection with or
relating to a certain contract entitled:

Project # _____, Contract # _____,
between it and said Releasee;

And Does Hereby Agree to hold Releasee harmless from any and
all claims and demands of whatever type made or instituted by its
subcontractors, employees, consultants, suppliers, materialmen,
agents, and their respective successors and assigns, with respect
to said contract or work performed pursuant thereto.

WITNESSED Name of Firm: _____

WITNESSED By: _____
Its _____
Duly Authorized

STATE OF _____) _____, A.D., _____
COUNTY OF _____) ss. _____
_____)

Personally appeared _____, who is
_____ of said Corporation, signer and
sealer of the foregoing instrument, and acknowledged the same to
be his/her free act and deed on behalf of said Corporation,
before me.

NOTARY PUBLIC
Commissioner of the Superior Court
My Commission Expires: _____

TRADE CONTRACT ATTACHMENT

New Haven Parking Authority ("Owner") and _____ ("Trade Contractor")
further agree as follows:

The Trade Contractor acknowledges and agrees (i) that the role of Turner Construction Company ("Program Manager") is to function solely on behalf of and for the benefit of the Owner, (ii) that the Trade Contractor waives all claims, whether in contract, tort or otherwise, that it may now or hereafter have against the Program Manager, (iii) that the Program Manager shall be an additional insured on the insurance policies of the Trade Contractor and that all such policies shall contain a waiver of subrogation in favor of the Program Manager and (iv) that the Trade Contractor shall defend, indemnify and hold harmless Owner and Program Manager from any and all claims, demands, and suits (including, but not limited to suits for bodily injury and property damage) in any way arising out of or related to their respective contracts or alleged failure of Trade Contractor to perform its responsibilities or obligations.

The Trade Contractor further acknowledges that it must, at its own expense; work cooperatively with all other Trade Contractors on site to coordinate its work with the work of such Trade Contractors, including modifying its schedule and activities. To further such coordination it must, when requested by the Program Manager, submit to the Program Manager, a current updated copy of its detailed schedule to demonstrate the status of such coordination and, if the Program Manager deems it necessary, to modify its schedules and operations as and in the manner required by the Program Manager and to execute its work in the manner shown on the revised schedule. It is agreed that any such modifications required by the Program Manager or any resulting work shall not result in any claims against the Program Manager or the Owner and all such claims are waived. While the Program Manager may have the right to take such action, in no respect shall the Owner or the Program Manager be obligated to do so.

(Print Name)

(Signature)

Trade Contractor Acknowledgement

**COMMUNITY SUBCONTRACTOR UTILIZATION PROGRAM
MONTHLY PAYMENT STATUS REPORT**

Month/Year Ending _____

General Contractor/Prime Contractor Name: _____

NHPA Project Number: _____

NHPA Contract Number: _____

Project Name: _____

Notice to Proceed Contract Start Date: _____

Original Contract Amount: _____

Current Contract Amount with Approved Changed Orders: _____

Percent Contract Amount Completed to Date: _____

Listing of company name, their contract amount, and payment information for all DAS-Certified Small (SBE) and Minority Business Enterprises (including Minority owned Business Enterprises (MBE), Women owned Business Enterprises (WBE), and/or Disabled owned Business Enterprises (DisBE)), and the use of businesses having a place of business within the City of New Haven (NHB) to comply with NHPA's Community Subcontractor Utilization Program provisions:

Company Name*	*Identify as SBE, MBE,WBE, DisBE or NHB	Contract Amount	Total Payment To Date	Total Due Per This Month's Invoice

Signature of Company Official: _____

Printed Name and Title of Signatory: _____

Date of Report: _____:

Attach additional sheets as needed.

Submit updated report with each pay requisition

GENERAL CONDITIONS

GENERAL CONDITIONS

PART I

101. DEFINITIONS

Whenever used in any of the Contract Documents, the following meanings shall be given to the terms herein defined:

a. The terms "Contract" and "Contract Documents" mean that group of documents which embody the agreement between the Authority and the Contractor for the construction and installation of the improvements specified therein, and shall include the following: Executed Agreement, Addenda (if any), Invitation for Bids, Instructions to Bidders, Signed Copy of Bid, General Conditions, Special Conditions, Technical Specifications and Drawings (as listed in the Schedule of Drawings).

b. The term "Authority" or "Owner" refers to the New Haven Parking Authority.

c. The term "City" means the City of New Haven, Connecticut.

d. The term "State" means the State of Connecticut.

e. The term "Contractor" means the person, firm or corporation entering into the Contract with the Authority to construct and install the improvements embodied in the Contract.

f. The term "Project Area" means the physical area ("contract limits") in which the improvements contemplated by the Contract are to be installed or constructed.

g. The term "Engineer" means the Authority's Director of Planning & Engineering or Engineer in charge serving the Authority with architectural or engineering services, his successor, or any other person or persons, employed by the Authority for the purpose of directing or having charge of the improvements embodied in this Contract, the said Engineer acting directly or indirectly through any Assistant Engineer having general charge of the work or through any assistant having immediate charge of a portion thereof limited by the particular duties entrusted to him.

h. The term "Technical Specifications" or "Specifications" means that part of the Contract Documents which describes, outlines and specifies the qualities, quantities, technical characteristics, data and standards of the materials to be furnished, the workmanship required, and the methods to be used in carrying out the construction and installation of the improvements contemplated by this Contract.

i. The term "Addendum" or "Addenda" means any changes, revisions or clarifications of the Contract Documents which have been duly issued to prospective bidders prior to time of receiving bids.

102. COMMUNICATIONS

All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.

Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Agreement or if delivered to the field office of the Contractor or at such other office as the Contractor may from time to time designate in writing to the Authority, or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, or if transmitted via telefax, in each case addressed to either of such offices.

All papers required to be delivered to the Authority shall, unless otherwise specified in writing, be delivered to the Main Office of the New Haven Parking Authority, 50 Union Avenue, Union Station, New Haven, CT 06519-1752. Any notice to or demand upon the Authority shall be sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage-prepaid envelope, or if transmitted to said Authority at such address with charges prepaid by any telegraph company, or if transmitted via telefax, or if delivered by any of the foregoing means to such other representatives of the Authority or to such other addresses as the Authority may subsequently specify in writing to the Contractor for such purpose.

Notice to either party shall be deemed to have been given as of the time of actual delivery or in the case of mailing when the same should have been received in due course of post, or in the case of telegrams or telefax transmittals, at the time of actual receipt as the case may be.

103. RESPONSIBILITIES OF CONTRACTOR

Except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fees or other expenses and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to deliver all improvements embraced in this Contract complete in every respect within the specified time.

Where the work is located in a public street or highway, the Contractor must apply for and obtain such permit or permits as

may be necessary. The Contractor must provide such security or insurance as may reasonably be required incidental to and as a prerequisite to such permit or permits. He shall bear all expense for and incidental to securing the permit or permits and complying with the terms and requirements thereof.

The Contractor shall arrange his operations and the spaces occupied by him so as to safely provide pedestrian and vehicular access in or to the Project Area as may be necessary when required to maintain such traffic, and to safely provide access to properties along the street, particularly driveways, access to fire hydrants, manholes, gate boxes and other utilities. If for any reason it is not expedient to backfill an excavation, the Contractor shall construct and maintain suitable bridges to carry pedestrians and traffic in or to the street, driveway or property in question as directed by the Engineer. The Contractor shall confine his occupancy of public or travelled ways to the smallest spaces compatible with the efficient performance or construction of the work contemplated by this Contract, and more particularly to such limits as are set by the Contract Documents.

104. OTHER CONTRACTS

The Authority may award, or may have awarded, other contracts for additional work, and the Contractor shall cooperate fully with such other contractors, by scheduling his own work with that to be performed under other contracts as may be directed by the Engineer. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor as scheduled, but shall act as necessary to insure the orderly, proper and economical construction of the whole project or group of projects.

In case of conflict between contractors, the Engineer will determine the location where work shall commence. Such determination shall have no effect on the contract costs and will not be considered as the basis for a claim for additional compensation.

The work under this Contract shall be coordinated with any other work which may be under construction or contemplated in the same general area. In order that the work under this Contract may conform to the conditions under which it has been undertaken, the Engineer will determine the location where the work will commence. Such determination shall have no effect on the contract cost and will not be considered as the basis for a claim for additional compensations.

105. MUTUAL RESPONSIBILITY OF CONTRACTORS

If, through acts of neglect on the part of the Contractor, any other contractor or any subcontractor shall suffer loss or damage on the work, the Contractor shall settle with such other

contractor or subcontractor by agreement or arbitration, if such other contractor or subcontractor will so settle. If such other contractor or subcontractor shall assert any claim against the Authority on account of any damage alleged to have been so sustained, the Authority will notify this Contractor, who shall defend at his own expense any suit based upon such claim and, if any judgment or claims against the Authority shall be allowed, the Contractor shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith.

106. SUPERINTENDENCE BY CONTRACTOR

a. Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall have a competent superintendent, satisfactory to the Authority and the Engineer, on the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and expediting of this work.

b. The Contractor shall lay out his own work unless otherwise provided, and he shall be responsible for all work executed by him under the Contract. He shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from this failure to do so.

107. SUBCONTRACTS

a. The Contractor shall not execute an agreement with any subcontractor or permit any subcontractor to perform any work included in this Contract until he has submitted a non-collusion affidavit from the subcontractor in substantially the form shown below and has received written approval of such subcontractor from the Authority. He shall submit a written statement concerning such information as the Authority may require concerning the experience, ability and responsibility of the proposed subcontractor and the scope of the subcontract.

NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR

State of _____)
County of _____) ss.

_____, being first duly sworn, deposes and says that:

1. He is (owner, partner, officer, representative, or agent) of _____ hereinafter referred to as the "Subcontractor";

2. He is fully informed respecting the preparation and contents of the Subcontractor's Proposal submitted by the

Subcontractor to _____, the
Contractor for certain work in connection with the
_____ Contract pertaining to the
_____ Project in New Haven,
Connecticut;

3. Such Subcontractor's Proposal is genuine and is not a collusive or sham proposal;

4. Neither the Subcontractor nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other bidder, firm or person to submit a collusive or sham proposal in connection with such Contract or to refrain from submitting a proposal in connection with such Contract, or has in any manner, directly or indirectly, sought by unlawful agreement or connivance with any other bidder, firm, or person to fix the price or prices in said Subcontractor's proposal, or to fix any overhead, profit or cost element of the price or prices in said Subcontractor's proposal, or to secure through collusion, conspiracy, connivance or unlawful agreement any advantage against the Authority or any person interested in the proposed Contract; and

(5) The price or prices quoted in the Subcontractor's proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Subcontractor or any of its agents, representatives, owners, employees, or parties in interest including this affiant.

(Signed) _____

Title

Subscribed and sworn to before me this _____ day of _____,
19____

TITLE

My commission expires _____, 19____

b. No proposed subcontractor shall be disapproved by the Authority except for cause. Subcontractors shall not be changed during the course of work without prior approval of the Engineer.

c. The Contractor shall be fully responsible to the Authority for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

d. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to require compliance by each subcontractor with the applicable provisions of the Contract. In addition, the Contractor shall insert in each subcontract a provision whereby subcontractor consents to the Contractor's assignment of the subcontract to the Authority pursuant to subparagraph (g) below.

e. Nothing contained in this Contract shall create any contractual relationship between any subcontractor and the Authority.

f. All subcontractors shall pay their employees engaged in the work herein specified in accordance with the schedule of prevailing wages as set forth in the Contract Documents.

g. Each subcontract agreement for a portion of the work is hereby assigned by Contractor to the Authority provided that:

(i) the assignment is only effective upon termination of this Contract by the Authority for cause and only for those subcontract agreements which the Authority accepts by notifying the subcontractor in writing; and

(ii) the assignment is subject to any prior rights of the Contractor's surety, if any, obligated under bonds relating to the Contract.

108. FITTING AND COORDINATION OF THE WORK

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors, or material men engaged upon this Contract. He shall be prepared to guarantee to each of his subcontractors the locations and measurements which they may require for the fitting of their work to all surrounding work.

109. PERMITS AND CODES

a. The Contractor shall give all notices required by, and comply with, all applicable laws, ordinances and codes of the Authority, the City of New Haven, the State of Connecticut and the Federal Government. All construction work and/or utility installations shall comply with all applicable ordinances and codes, including any terms and conditions imposed by any written waivers. Before installing any work, the Contractor shall examine the Drawings and Technical Specifications for compliance with applicable ordinances and codes, and shall immediately report any discrepancy to the Authority. Where the requirements of the Drawings and Technical Specifications fail to comply with such applicable ordinances or codes, the Authority will adjust the Contract by Change Order to conform to such ordinances or

codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price.

Should the Contractor fail to observe the foregoing provisions and proceed with the construction work and/or installation of any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such methods are in compliance with the Drawings and Technical Specifications), the Contractor shall correct the methods of doing such work without cost to the Authority, but a change order will be issued to cover only the excess cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

b. The Contractor shall, at his own expense, secure and pay to the appropriate department of the City of New Haven or State of Connecticut the fees or charges for all permits for street pavements, sidewalks, sheds, removal of abandoned water taps, sealing of house connection drains, pavement cuts, building, electrical, elevator, plumbing, water, gas, sewer and/or any other permits required by the regulatory body of any of its agencies. The Contractor's attention is called to the fact that the City Engineer's Office has a list of all state maintained streets which is readily available to the Contractor for inspection.

c. The Contractor shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and shall commit no trespass on any public or private property in any operation due to or connected with the improvements embraced in this Contract.

110. WAGES

a. State of Connecticut Requirement

The wages paid on an hourly basis to any mechanic, laborer, or workman employed upon the work herein contracted to be done, and the amount of payment or contribution paid or payable on behalf of each such employee to an employee's welfare fund, as defined in Section 31-78 of the General Statutes of Connecticut shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employee to any such employee's welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day.

b. City of New Haven Requirement (Section 82 of City Charter)

In all contracts for the construction, repairing, or remodeling of public buildings or public works of any kind by the City of New Haven or any of its divisions, the wages paid any mechanic, laborer, or workman employed under the contract shall be at the rate of wages for the same type of work in the same trade or occupation prevailing in the City of New Haven, based upon the wage schedule and rates therein set by the United States Department of Labor for the New Haven area.

c. State Wage Standards

The wage determinations governing the work to be performed under this Contract are set forth elsewhere in the Contract Documents. Nothing herein contained shall be construed to permit the payment of wages or salaries below the rates required by any other provision of this Contract.

111. INSURANCE

a. The Contractor shall carry or require that there be carried Worker's Compensation Insurance for all his employees and those of his subcontractors engaged in work at the site, in accordance with State Worker's Compensation Law and shall certify that it and its subcontractors are not in arrears to the State of Connecticut Second Injury Fund.

b. The Contractor shall carry or require that there be carried Manufacturer's and Contractor's Public Liability Insurance with limits of \$2,000,000 to protect the contractor and his subcontractors against claims for injury to or death of one, or more than one, person because of accidents which may occur as a result of operations under the Contract; such insurance shall cover the use of all equipment including, but not limited to, excavating machinery, demolition machinery, trenching machines, cranes, hoists, rollers, concrete mixers, motor vehicles, etc. in the construction of the improvements embraced in this Contract.

c. The Contractor shall carry, during the life of the Contract, Property Damage Insurance in an amount of not less than \$1,000,000 to protect him and his subcontractors from claims for property damage which might arise from operations under the Contract.

d. The Contractor shall carry, and require that his subcontractors carry, Automotive Insurance, covering all motor vehicles used on the work with limits of \$1,000,000 personal injury liability and property damage liability, to protect against claims which might arise from the operations of this Contract.

e. Prior to commencement of the work contemplated by the Contract Documents, the Contractor shall provide certificates of insurance showing coverage by an insurance carrier authorized by the State of Connecticut to write insurance in the State. The certificates shall show the Authority as an additional named insured. Said Certificate should contain the following endorsements:

1. This insurance policy is intended to and shall indemnify and save harmless the New Haven Parking Authority, their employees, officers and agents from any and all claims, suits, actions, demands, fines, fees, judgments, damages and costs arising out of or in any way connected with any activities or the performance of any obligations under this Contract by the Contractor or any subcontractor or their agents or employees.

2. The Contractor and insurance company waive governmental immunity in the adjustment of claims or the defense of any suit, action or claim brought against the New Haven Parking Authority.

3. An endorsement of the work description, contract name, number and location;

4. An endorsement that the insurance company will give at least thirty (30) days written notice to the Authority prior to any modification or cancellation of any such insurance coverage; and

5. An endorsement that the Contractor will be responsible for the payment of all insurance premiums and/or charges.

f. At the discretion of the Authority, the Contractor may be asked to submit copies of his Worker's Compensation and Manufacturer's and Contractor's Public Liability, Property Damage, Automobile, Fire and Extended Coverage, if applicable, insurance policies to the Authority for review and approval. The Authority may, in writing, notify the Contractor of any disapproval of any such policies, and satisfactory policies shall be provided in place of those disapproved. The Contractor shall submit an insurance certificate in addition to a copy of each policy. The Contractor shall require its subcontractors to obtain policies of similar insurance before each commences work. All such insurance shall be carried with financially responsible insurance companies, licensed in the State and approved by the Authority and shall be kept in force until the Contractor's work is accepted by the Authority. Contracts of insurance, covering all operations under this contract, which expire before the Contractor's work is accepted by the Authority shall be renewed and submitted to the Authority for its approval.

112. PATENTS

The Contractor shall pay all royalties and license fees associated with the manufacture or use of proprietary items subject to such fees. He shall hold and save the Authority, its officers and employees, harmless from liability of any nature of kind, including, but not limited to, costs and expenses arising out of the use of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract, including its use by the Authority, unless otherwise specifically stipulated in the Technical Specifications.

113. WARRANTY OF TITLE

Materials, supplies, or equipment purchased for the work shall not be subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller, supplier or any other person excepting only the Contractor. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Authority free from any claims, liens, or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Authority. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing material for the work when no formal contract is entered into for such materials.

114. ASSIGNMENT OR NOVATION

The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities or responsibilities under this Contract without the written consent of the Authority, provided, however, that assignment to banks, trust companies, or other financial institutions may be made without the consent of the Authority. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for services rendered and materials, tools and equipment supplied for the performance of the work under this Contract in favor of all persons, firms or corporations rendering such labor or services or supplying such materials, tools or equipment.

115. PROGRESS SCHEDULE

The Contractor shall submit for approval immediately after execution of the Agreement, a carefully prepared Progress Schedule, which Progress Schedule shall update and supplant any preliminary schedules provided as part of the bid process, if applicable, showing the proposed dates of starting and completing each of the various sections of the work, the anticipated monthly payments to become due the Contractor, and the accumulated percent of progress each month.

116. PROGRESS OF WORK

In general, work shall be continued and prosecuted throughout the term of the Contract, including the winter season. The Contractor will be expected to keep work going whenever possible. The Engineer will determine when conditions are unfavorable for work, or for any portion thereof, and may order that the work be suspended on any part of all portions of the Contract whenever, in his opinion, the conditions are not such as will insure first-class work.

117. CONSTRUCTION EQUIPMENT

Prior to the start of work, the Contractor shall submit to the Engineer, for his approval, a "Schedule of Equipment" stating the type and number of pieces of equipment to be used on the job. All equipment to be used in the City streets and in the Authority's garages and paved surface lots shall be equipped with rubber tires. The use of equipment without rubber tires shall be by written approval and under the direction of the Engineer.

118. ACCESS TO PROJECT AREA

The terms "land", "private land", "property", "private road", "driveway", etc. as used in these Specifications, shall be interpreted to include not only the property or properties of any private individual or corporation, but also the property of a public utility or of any other public body not used as and legally established as a public street or highway. The provisions of this section shall apply to operations within the sites of any public building or institution, and similar location.

The Contractor should make inquiry and ascertain the limits, conditions, etc. of rights-of-way, access, etc., possessed by the Authority and available for use by the Contractor. Certain essential facts as to such rights may be indicated on plans or elsewhere in the Contract Documents. In some cases, the indications in the Contract Documents may restrict the Contractor more closely than the full extent of the right possessed by the Authority, in which case such indicated

restrictions shall govern the operations of and occupancies by the Contractor. The Contractor and those operating under him must know and conform to the limits of the spaces which he may occupy at the site of the work, the means of access thereto, and the conditions under which he may occupy or use such rights.

If the Contractor, by direct negotiation and bargain with any land owner, lessee or tenant, has secured for himself any right to use more space or greater privileges than the space provided by the Authority, for purposes incidental to the performance of the Contract, he shall upon request of the Engineer, furnish to the Engineer proper evidence that such additional rights have been properly secured and assurance that no damage to or claim upon the Authority will arise therefrom. The Authority shall not be liable in any way for any expense incurred by the Contractor in securing any such right to use additional property.

The Contractor shall be responsible for and reimburse the Authority for any and all losses, damage or expense which the Authority or others may suffer, either directly or indirectly or through any claims of any person or party, for any trespass outside the spaces and rights-of-way provided by the Authority to the Contractor or any violation or disregard of the terms and conditions established for the use or occupancy of those rights or for negligence in the exercise of those rights. The Authority may retain or deduct from any sum or sums due or to become due to the Contractor such amount or amounts as may be proper to insure the Authority against loss or expense by reason of the failure of the Contractor to observe the limits and conditions of the rights-of-way, rights-of-access, etc., provided by the Authority.

The Contractor shall request the Engineer to give proper notice to the owners and tenants of land traversed by the right-of-way or access ways to be used or occupied by the Contractor prior to any entry or re-entry into such rights-of-way, etc., or shall cause proper notice to be given to said owners and/or tenants. The Contractor shall thereafter wait a sufficient time to permit the delivery of such notice or notices, and also to allow time in which the owners or tenants may make necessary adjustments to avoid undue loss or inconvenience by the interference with their ordinary use of occupancy caused by the acts of the Contractor.

The Contractor shall take proper means to identify his employees, etc., when operating within private or restricted lands. He shall not permit his employees, subcontractors, suppliers, etc., to trespass outside the limits of the spaces provided for him, to unnecessarily interfere with or to annoy or to commit any nuisance or scatter rubbish thereon, or to loiter therein when their presence is not essential to the work then underway. He shall not permit others attracted to the site of

his work by his operations to loiter in the vicinity of his work or to enter or damage private property, within or without and near the rights-of-way provided by the Authority, or to annoy the regular occupants or owners of such property.

If access is provided by means of any private road or driveway or through private roads, the Contractor shall permit the regular owners or users thereof to use the same so far as it is consistent with the construction of the work. If any existing driveway or road is damaged by use thereof, the Contractor shall at once restore it to as good condition as it would have been in had he not used it. The Contractor and those under him using any private road or driveway must assume to use that road or driveway on an "as is" basis and use it at their own risk. Neither the Authority nor the land owner shall be liable for damage to persons or property of the Contractor's forces arising from any defect in such road or driveway, except as such defect may be the consequence of negligence of the Authority or the land owner before the award of the Contract or after completion of the work called for by the Contract. The liability of any party may be limited by the terms of the right-of-way or right-of-access document. The land owner and the Authority make no representation that the road or driveway surface, culverts, etc. are adequate to carry any specific load or weight. The Contractor may be held liable to the owner or regular users of the road and driveway for injury, damage or loss by reason of the negligence of the Contractor in the operation of vehicles thereon, or with respect to damage done to the road or driveway by his forces or by reason of failure to provide and maintain suitable warnings of dangers created by the operations of the Contractor.

Should it be necessary to open or remove portions of any hedge, gate, fence, or similar structure, such opening shall not be kept open at any time when it is not essential to the conduct of the work. Temporary gates shall be provided and such openings shall be closed except when opened for the passage of persons or vehicles. The openings shall be permanently restored and repaired when no longer needed for the performance of the Contract. Precautions shall be taken by the Contractor to prevent unauthorized persons from passing through such temporary openings or, having passed through such openings into otherwise enclosed lands, from causing damage therein.

119. USE OF PREMISES

a. The Contractor shall confine his equipment, storage of materials, and construction operations to the Project Area, shown on the Drawings and as prescribed by ordinances or permits, or as may be directed by the Authority, and shall not unreasonably encumber the site or public rights-of-way with his materials and construction equipment.

b. The Contractor shall comply with all reasonable instructions of the Engineer and the ordinances and codes of the Authority, the City of New Haven, the State of Connecticut and the Federal Government.

120. PUBLIC UTILITIES

The actual location of utilities shall be determined by the Contractor. The information shown on the Contract Plans is only for information and convenience of the Contractor and is in no way warranted to indicate the true conditions.

The Contractor's attention is particularly called to the requirements of the State of Connecticut's Public Act No. 77-350 "An Act Concerning Excavations Near Underground Utility Facilities" (Call Before You Dig), which must be strictly followed.

The Contractor shall inquire of the utility companies as to their mains, conduits, services and service materials in and adjacent to the area under construction. The costs for such locations and any costs for connections or disconnections shall be paid by the Contractor unless otherwise specified.

The Contractor shall, without expense to the Authority and to the satisfaction of the Engineer, do everything necessary to support, protect and maintain all pipes, conduits, sewers, drains, wires, poles or fixtures of all kinds in line of the work or adjacent thereto, and all fences, buildings, or other structures which might be damaged by the work herein contemplated. The Contractor shall give at least twenty-four (24) hours notice before breaking ground, to the owners of the structures, pipes or wire conduits that may be affected by his operations and shall not cause any hindrance to or interference with any such owners or their agents in protecting or repairing their property should they wish to do so, but will suffer them to take all such measures as they may deem necessary for said purposes. The Contractor shall protect water pipes from freezing during cold weather.

The Engineer may require the Contractor to take proper steps to protect the main lines of public utilities in the immediate vicinity of the work when endangered by the operations of the Contractor and, if the Contractor fails to take adequate provisions to protect such lines or structures, the Engineer may employ others to perform protective work, as may be reasonably needed, at the Contractor's expense.

121. TECHNICAL SPECIFICATIONS AND DRAWINGS

Anything mentioned in the Technical Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Technical Specifications, shall be of like effect as if

shown on or mentioned in both. In case of any discrepancy in Drawings or Technical Specifications, the matter shall be immediately submitted to the Authority, without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

Except for the Contractor's executed set, all Drawings and the Technical Specifications are and remain the property of the Authority. Such Drawings and Technical Specifications are not to be used on other work, and those sets in usable condition shall be returned to the Authority, upon request, at the completion or cessation of the work or termination of the Contract.

122. CONTRACT DOCUMENTS AND DRAWINGS

The Authority will furnish the Contractor, without charge, six (6) copies of the Contract Documents, including Technical Specifications and Drawings. Additional copies requested by the Contractor will be furnished at cost.

The Contractor shall, at all times, keep at the site of the work two (2) complete sets of the Contract Drawings and Specifications, also of all further drawings or instructions issued covering the work under the Contract for his own use and that of the Engineer or his authorized representatives. All changes as they occur are to be recorded immediately thereon.

As part of his general supervision, the Contractor shall carefully study and compare all drawings, specifications and other instructions given to him and shall report to the Engineer for clarification of any errors, omissions or discrepancies in or between such documents.

123. SHOP DRAWINGS

a. All required shop drawings, machinery details, layout drawings, etc., shall be submitted to the Engineer in triplicate (one of which shall be a reproducible set, i.e., sepia or vellum) for his approval sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking, if necessary. The Contractor may proceed, only at his own risk, with manufacture or installation of any equipment or work covered by said shop drawings, etc., until they are approved and no claim, by the Contractor, for extension of the Contract time will be granted by reason of his failure in this respect.

b. Any drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific

mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment, if any, of Contract Price and/or time, otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been approved.

c. If a shop drawing is in accordance with the Contract or involves only a minor adjustment in the interest of the Authority, not involving a change in Contract Price or time, the Engineer may approve the drawing. The approval shall be general, shall not relieve the Contractor from his responsibility for adherence to the Contract for any error in the drawing and shall contain in substance the following:

"The modification shown on the attached drawing is approved in the interest of the New Haven Parking Authority to effect an improvement for the Project and is ordered with the understanding that it does not involve any change in the Contract Price or time; that is subject generally to all Contract Stipulations and covenants; and that it is without prejudice to any and all rights of the New Haven Parking Authority under the Contract and surety bond or bonds."

d. The Contractor shall furnish as many copies of approved shop drawings as are necessary for proper coordination of the drawings at the site at all times.

124. REQUESTS FOR SUPPLEMENTARY INFORMATION

It shall be the responsibility of the Contractor to make timely requests of the Authority for any additional information not already in his possession, which should be furnished by the Authority under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted in writing from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two weeks after Contract award and shall be as complete as possible at the time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provisions of this Section.

125. INSPECTION

a. All materials and workmanship will be subject to inspection, examination, or test by the Authority and the

Engineer at any and all times during manufacture of construction and at any and all places where such manufacture or construction is carried on. The Engineer shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality without charge therefor. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the Authority may by contract or otherwise, have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any moneys which may be due the Contractor, without prejudice to any other rights or remedies of the Authority.

b. The Contractor shall furnish promptly all materials reasonably necessary for any test which may be required. (See Section 128 - SAMPLES, CERTIFICATES AND TESTS, under GENERAL CONDITIONS.) All tests by the Authority will be performed in such manner as not to delay the work unnecessarily and shall be made as described in the Technical Specifications.

c. The Contractor shall notify the Engineer sufficiently in advance of backfilling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the Engineer, the Contractor shall uncover for inspection and recover such facilities all at his own expense when so requested by the Engineer.

Should it be considered necessary or advisable by the Engineer at any time before final acceptance of the entire work to make an examination of work already completed and inspected, by uncovering the same, the Contractor shall on request promptly furnish all necessary facilities, labor and materials to uncover the work. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus 10 percent of such costs to cover superintendence, general expenses and profit, shall be allowed the Contractor and in addition he shall be granted a suitable extension of time on account of the additional work involved, if completion of the work of the entire contract has been delayed thereby.

d. Inspection of materials and appurtenances to be incorporated in the improvements embraced in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the Technical

Specifications, shall be final, except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Area.

e. Neither inspection, testing, approval nor acceptance of the work in whole or in part by the Authority or its agents shall relieve the Contractor or his sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

126. REVIEW BY THE NEW HAVEN PARKING AUTHORITY

The Authority, its authorized representatives and agents shall, at all times, have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by the Authority through its authorized representatives or agents.

127. MATERIALS AND WORKMANSHIP

a. Unless otherwise specifically provided for in the Technical Specifications, all workmanship, equipment, materials and articles to be incorporated in the work shall be new and the best grade of the respective kinds for the purpose. The Engineer shall decide whether such workmanship, equipment, material and articles to be incorporated in the work are new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the Technical Specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.

b. The Contractor shall furnish to the Authority for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval as required full information concerning all other materials or articles which he proposes to incorporate in the work. (See Section 128 - SAMPLES, CERTIFICATES AND TESTS under GENERAL CONDITIONS.) Machinery, mechanical and other equipment, materials, or articles installed or used without such prior approval shall be at the risk of subsequent rejection.

c. Materials specified by reference to the number or symbol of a specific standard, such as an A.S.T.M. Standard, a Federal Specification or other similar standard, shall comply

with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation of Bids, except as such specific standards are limited or modified in such reference in regard to type, class or grade. The standards referred to, except as modified in the Technical Specifications, shall have full force and effect as though printed therein.

d. In addition to the requirements of the Technical Specifications, prior to the start of work, the Contractor shall notify the Engineer in writing of his anticipated sources of all materials proposed to be incorporated into the work. The Contractor shall further notify the Engineer in writing of any change in his source of anticipated source of materials.

e. The Authority may require the Contractor to dismiss from the work such employees or employees as the Engineer may deem incompetent, careless, or insubordinate.

128. SAMPLES, CERTIFICATES AND TESTS

a. The Contractor shall submit all material or equipment samples, certificates, affidavits, etc., as called for in the Contract Documents or required by the Engineer, promptly after award of the Contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.

Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information which will assist the Engineer in passing upon the acceptability of the sample promptly. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

b. Approval of any materials shall be general and shall not constitute a waiver of the Authority's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer may require the Contractor to make such check tests as he deems necessary and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been

incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable. If the aforementioned materials, equipment or accessories are caused to be removed or replaced by the Engineer, the cost of such removal or replacement shall not be considered cause for a change in the Contract Price or for extension of the contract time.

c. Except as otherwise specifically stated in the Contract, no separate payment for the costs of sampling and testing will be made, and all costs should be included in the Contract Price.

129. CARE OF WORK

a. The Contractor shall be responsible for the proper and continuous care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Authority. All damaged work and materials shall be immediately removed from the Project Area and replaced at the Contractor's expense.

b. The Contractor shall properly secure the Project Area, from the time the work is commenced until final completion and acceptance.

c. In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization from the Authority, is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. Any compensation claims by the Contractor on account of such emergency work will be determined by the Authority as provided in the Section 139-CHANGES IN THE WORK under GENERAL CONDITIONS.

d. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities, (except those which are to be replaced or removed), adjoining property, etc., and he shall, at his own expense completely repair any damage thereto caused by his operation.

e. The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with construction of the Improvements embraced in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Authority from any damages on account of

settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Authority may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

130. PARTIAL USE OF SITE IMPROVEMENTS

The Engineer, at his election, may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the Technical Specifications and if, in his opinion, each such section is reasonably safe, fit and convenient, for the use and accommodation for which it was intended, provided:

a. The use of such sections of the improvements shall in no way impede the completion of the remainder of the work by the Contractor.

b. The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.

c. The use of such sections shall in no way relieve the Contractor of liability due to having used defective materials or to poor workmanship.

d. The period of guarantee stipulated in the Section 146-GENERAL GUARANTY under GENERAL CONDITIONS, shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

131. FIRES

Burning shall not be permitted.

132. BLASTING AND EXPLOSIVES

When the use of explosives is necessary for the prosecution of the work, all requirements of local and state laws and regulations shall be complied with and all necessary permits and licenses obtained by the Contractor at his expense. Permits and licenses shall be shown to Engineer.

The Contractor will keep on the job only such quantities of explosives as may be needed for the work underway and only during such time or times as they are being used. Explosives shall be sorted in a secure manner in locked containers and separate from all tools. Caps and detonators shall be stored separately from explosives.

The Contractor shall notify each public utility company, having structures in proximity to the site of the work and others who may be affected, of his intention to use explosives and such

notice shall be given sufficiently in advance to enable the companies, the Contractor and others to take such steps as they may deem necessary to protect utilities and property from injury. Such notice shall not relieve the Contractor of responsibility for any damage resulting from his blasting operation.

Explosives shall be of such power, placed and used in such quantities and positions as will not make the excavation unduly large, nor shatter unnecessarily the rock mass structure, upon or against which structures are to be built.

The rock obstacle or mass structure must be covered sufficiently when blasts are fired to prevent damage or injury to persons or property or the scattering of broken fragments on the adjacent ground. Adequate warning shall be given all persons in the vicinity before any blast is discharged.

No separate payment shall be made for blasting.

133. DEWATERING

The Contractor shall provide all necessary pumps, dams, drains, ditches, flumes, well points and other means of excluding and removing water from trenches, tunnels and other parts of the work, and for preventing the slopes from sliding or caving. He shall satisfactorily remove all water which interferes with the work. The flow of all sewers, drains, house connections and water courses encountered shall be maintained and provided for by the Contractor without damage or nuisance to other parties. All connections shall be restored as ordered. Before any masonry is placed or sewer pipes are laid, suitable drains shall be provided as needed and maintained in order that the bottom may be free from water and sufficiently dry at all times. No masonry of any kind laid in cement mortar shall be placed in water. No water shall be allowed to flow over or rise up on fresh concrete and no drainage shall be allowed to enter the sewer until such time and under such conditions as the Engineer may direct. The Contractor shall provide and operate additional pumps or drains at any place where the Engineer shall deem them necessary.

Where, in the opinion of the Engineer, some form of underdrainage is necessary but conditions do not warrant the installation of tile or pipe underdrain, he may order a layer of broken stone of suitable size placed in the bottom of the trench below the sewer, to serve as a drain.

No direct payment shall be made for the work specified herein, but compensation for such work and all expenses incidental thereto shall be considered as having been included in the Contract Price for the work.

134. CONTROL POINTS, BENCH MARKS AND LAYOUT OF THE WORK

The Contractor shall be held responsible for the protecting and safe guarding of all control points and bench marks set. Any replacement or re-establishment of control points or bench marks shall be at the expense of the Contractor.

The Contractor shall lay out the work and determine and maintain all lines, levels and grades required for the proper execution of the work. As the work proceeds, he shall check every major element of work for line, level and plumb. The Contractor shall submit all data prior to the start of construction in accordance with the requirements of the Technical Specifications, "LAYOUT OF THE WORK", as applicable.

135. ACCIDENT PREVENTION

a. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of or his failure to prosecute the work. The safety provisions of applicable laws and building and construction codes shall be observed including but not limited to OSHA and the Contractor shall take or cause to be taken such additional safety and health measures as the Authority may determine to be reasonably necessary. Any costs arising out of the taking of such health or safety measures shall be borne by the Contractor. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws.

b. The Contractor shall indemnify and save harmless the Authority, its employees, officers and agents from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this Contract, and the Contractor shall defend at his own expense any action, suit, proceeding, or other claim brought against the Authority, its employees, officers and agents by any such person.

136. ACCIDENT PREVENTION AND REPORTS

The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly prepare all necessary reports and file same in accordance with applicable law and shall furnish a copy of same to the Authority.

137. SANITARY FACILITIES

When required, the Contractor shall furnish, install and maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State of Connecticut and City of New Haven. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

138. REMOVAL OF DEBRIS, CLEANING, ETC.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights-of-way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for the work, and put the whole site of the work and public rights-of-way in a neat and clean condition.

No separate payment will be made for this removal and clean-up, and all costs shall be included in the Contract Price.

139. CHANGES IN THE WORK

a. The Authority may make changes and alterations in the scope of the work required to be performed by the Contractor by making additions thereto or by omitting work therefrom, or by giving extensions of time for the performance of this Contract or by giving any other forbearance, without invalidating the Contract, and without relieving or releasing the Contractor from any of his obligations under the Contract or any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the guarantee bonds, and without relieving or releasing the surety or sureties of said bonds. Notice of any such change, alteration, extension or forbearance to the surety or sureties of said bonds shall not be required. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise.

b. Except for the purpose of affording protection against any emergency endangering life or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in receipt of a written order from the Authority authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price will be valid unless undertaken as aforesaid or so ordered.

c. The Authority shall, before ordering the Contractor to proceed with desired changes, request an itemized proposal (including a person-day analysis for labor, percentage on labor for payroll taxes, materials, delivery charges and other miscellaneous items) from him covering the work involved in the change, after which the procedure shall be as follows:

1. If the Proposal is acceptable, the Authority will prepare the change order in accordance therewith for acceptance by the Contractor; and

2. If the Proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Authority may order the Contractor to proceed with the work on a cost-plus-limited basis which is defined as the net cost of the work plus an allowance to cover overhead and profit, as stipulated below, the total cost not to exceed a specified limit, i.e., the amount initially proposed by the Contractor. The following allowances for overhead and profit are hereby established as reasonable and shall apply.

(a) For all labor the Contractor shall receive the rate of wage actually paid as shown by his certified payroll, which shall be at least the minimum rate established by the Contract Documents. For all foremen in direct charge of the work the Contractor shall receive the actual wage paid the foremen, as shown on his certified payroll. No part of the salary or expense of anyone above the grade of foreman and having general supervision of the work, will be included in the labor item.

Fifteen percent (15%) of the extra cost of all labor furnished by the Contractor, net of the amounts paid for labor insurance and taxes as set forth in paragraph (b), below.

(b) For the cost of all insurance and taxes imposed by law on labor employed on the work, i.e., Workman's Compensation, FICA, FUT, SUT, etc., the Contractor shall receive a pro-rated share of the actual amount paid to account for the annual limit of such insurance and taxes. The cost of any other insurance or tax will not be considered as part of the cost of a change in the work.

(c) Fifteen percent (15%) of the net extra cost of all materials used by the Contractor, less any allowable cash discounts, delivered on the work, including delivery charges as shown by original receipted bills.

(d) Rental rates for any power operated machinery, trucks or equipment, which it may be found necessary to use on cost-plus work shall be negotiated between the Engineer and the Contractor. These rates shall be reasonable and shall be based on those prevailing in the area where such is to be done, and they shall be agreed upon in writing before the work is begun. The

Contractor and the Engineer shall agree to hourly, daily or monthly equipment rental rates depending on the period of time required to complete the work covered by a change. In no case shall the rental rates exceed the rates set up in the current edition of the "Associated Equipment Distributors Compilation of Rental Rates for Construction Equipment" plus the cost of fuel and lubricants. Those rates shall include all repairs, fuel, lubricants, taxes, insurance, depreciation, storage and all attachments complete, ready to operate, but excluding operators. Operators shall be paid as stated hereinabove for labor.

No percentage for overhead and profit shall be added to the amounts of equipment rental prices agreed upon, and the price agreed upon shall be the total compensation allowed for use of such equipment.

d. Each change order shall include in its final form:

1. A detailed description of the change in the work.
2. The Contractor's proposal (if any) or a conformed copy thereof.
3. A definite statement as to the resulting change in the Contract Price and/or time.
4. The statement that all work involved in the change shall be performed in accordance with the contract requirements except as modified by the change order.

140. CLAIMS FOR EXTRA COST

a. If the Contractor claims that any instructions by the Authority or otherwise involve extra cost or extension of time, he shall, within ten (10) days after the receipt of such instruction, and in any event before proceeding to execute the work, submit his protest thereto in writing to the Authority, stating clearly and in detail the basis of his objections. No such claims will be considered unless so made.

b. Claims for additional compensation for extra work due to alleged errors in ground elevations, contour lines, or bench marks will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.

c. Any discrepancies which may be discovered between actual conditions and those represented by the Drawings shall at once be reported to the Authority and work shall not proceed, except at the Contractor's risk, until written instructions have been received by him from the Authority.

d. If, on the basis of the available evidence, the Authority determines that an adjustment of the Contract Price and/or time is justifiable, the procedure shall then be as provided in Section 139 - CHANGES IN THE WORK under GENERAL CONDITIONS.

e. During the progress of the work, if the Contractor encounters at the site unknown physical conditions differing materially from those inherent in work of the character provided for in this Contract, he shall promptly and before such conditions are disturbed, notify the Engineer in writing. The Engineer shall thereupon investigate such conditions and if he finds that they do materially differ, he shall cause such changes to be made in the Specifications and Drawings as may be deemed necessary, and shall make such equitable adjustment in the Contract Price or time as is justified, if any, by written order, as provided in the Section 139 - CHANGES IN THE WORK. No claim of the Contractor for adjustment hereunder shall be allowed unless he has given notice as above required.

141. DISPUTES

a. All disputes arising under this Contract or its interpretations, whether involving law or fact or both, or extra work, and all claims for alleged breach of contract shall within ten (10) days of commencement of the dispute be presented in writing by the Contractor to the Authority for decision. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim, but shall state the facts surrounding the dispute in sufficient detail to identify the claim together with its character and scope. In the meantime, the Contractor shall proceed with the work as directed. Any claim not presented in writing within the time limit specified within this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the Authority of notice thereof.

b. The Contractor shall submit in detail his claim and his proof thereof. Each decision by the Authority will be in writing and will be mailed or otherwise delivered to the Contractor pursuant to Section 102.

c. Any unresolved dispute or claim arising out of or related to the Contract Documents or the breach thereof shall be settled by arbitration before the American Arbitration Association in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association unless the parties agree otherwise and judgement upon the award rendered by the arbitrator or arbitrators may be entered in any court having jurisdiction thereof.

d. Notice of demand for arbitration shall be filed in writing with the other party and with the American Arbitration Association or other dispute resolution entity agreed to by the parties. Demand for arbitration of any dispute may not be made until the Authority has rendered a final written decision on the dispute/claim pursuant to subparagraph b above or until 60 days after Contractor's submission of a dispute/claim to the Authority, in the event the Authority fails to render a decision within said 60 days.

e. The Contractor in no case shall delay or stop the work by reason of any dispute, demand for arbitration or arbitration proceeding.

f. A party who files a demand for arbitration must assert in the demand all claims then known to that party on which arbitration is permitted to be demanded. When a party fails to include a claim through oversight, inadvertence or excusable neglect, or when a claim has matured or been acquired subsequently, the arbitrator or arbitrators may permit amendment.

g. The award rendered by the arbitrator or arbitrators shall be final, and judgement may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

142. PAYMENTS TO CONTRACTOR

1. Partial & Final Payments

a. The Contractor shall prepare his requisition for partial payment as of the last day of the month and submit it, with the required number of copies, to the Engineer for his approval. The amount of the payment due the Contractor shall be determined by the total value of work completed to date, and deducting (i) five percent (5%) of the total amount, to be retained until final payment and (ii) the amount of all previous payments. The total value of work completed to date shall be based on the estimated amount of work completed and on the Contract Price Itemization included in the Contractor's Bid.

b. Monthly or partial payments made by the Authority to the Contractor are moneys advanced for the purpose of assisting the Contractor to expedite the work of construction. All completed work covered by such monthly or partial payments shall remain the property of the Contractor and he shall be responsible for the care and protection of all materials and work upon which payments have been made. Such payments shall not constitute a waiver of the right of the Authority to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the Authority in all details.

c. The Authority before making payment may require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the project) and services to the Contractor, if the Authority deems the same necessary in order to protect its interest. However, the Authority may, if it deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments so made shall in no way impair the obligations of any surety or sureties furnished under this Contract.

d. Further, the Authority may, if it deems such action advisable, make payment in part or in full to the Contractor, although the Authority has notice or knowledge of the existence of claims, causes of action, or disputes by subcontractors, laborers, material men, suppliers of equipment and services and others, against the Contractor, and any payments so made shall in no way impair the obligations of any surety or sureties furnished under this Contract.

e. The Authority may require a hold harmless/release agreement, lien waivers and consent of surety prior to release of the payment.

f. After final inspection and acceptance by the Authority of all work under the Contract, the Contractor shall prepare his requisition for final payment. Final payment to the Contractor shall be made subject to his furnishing the Authority with a release in satisfactory form of all claims against the Authority arising under and by virtue of his Contract, other than claims specifically outlined in and reserved by Contractor in any demand for arbitration filed in accordance with the provisions of Section entitled DISPUTES under GENERAL CONDITIONS.

2. Withholding Payment

The Authority may withhold from any payment otherwise due the Contractor, which payment may include amounts due from Contractor to subcontractors and materialmen for work performed on or materials furnished to the project, so much of said payment as may be necessary to protect the interests of Authority. The foregoing provisions shall be construed solely for the benefit of the Authority and will not require the Authority to determine or adjust any claims or disputes between the Contractor and his subcontractors or material dealers, or to withhold any money for their protection unless the Authority elects to do so. The failure or refusal of the Authority to withhold any monies from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

3. Payments Subject to Submission of Certificates

Each payment to the Contractor by the Authority shall be made subject to submission by the Contractor of all written certificates required of him by the Section 203 - CONTRACTOR'S CERTIFICATES under GENERAL CONDITIONS.

4. Contract Payment Procedures

a. Before any payment is made to the Contractor, upon request by the Authority the Contractor shall submit to the Authority lien waivers for the prior month signed by all subcontractors showing that they have received payment as set forth below. If any subcontractor has not been paid, a written statement explaining the reason why shall be submitted to the Authority. The lien waiver form shall contain a notice to the subcontractor stating the reason(s) for withholding payment.

To ensure prompt payment of subcontractors, the Contractor shall make payment to any subcontractor employed by such Contractor within thirty (30) days of payment by the Authority to the Contractor for any work performed or for materials furnished by such subcontractor, provided such Contractor may withhold such payment if such Contractor has a bona fide reason for such withholding and if such Contractor notifies the affected subcontractor in writing of his reasons for withholding such payment and provides the Authority with a copy of the notice within such thirty (30) days period.

The Contractor shall include in each subcontract entered into by the Contractor for the purpose of performing such construction contract (1) a payment clause which obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract within thirty (30) days out of such amounts as are paid to the Contractor by the Authority under such contract; and (2) an interest penalty clause which obligates the Contractor to pay the subcontractor an interest penalty of one and one-half percent per month, or any higher amount allowed by law, on amounts due in the case of each payment not paid in accordance with the payment clause included in the subcontract pursuant to provision (1) above. This section shall not be construed to prohibit progress payments prior to final payment of the subcontract.

The Contractor shall include in each of its subcontracts a provision requiring each subcontractor to pay any amounts due any of its sub-subcontractors within thirty (30) days after such subcontractor receives a payment from the Contractor which encompasses labor or material furnished by such subcontractor.

143. FINAL INSPECTION

When the improvements embraced in this Contract are substantially complete, the Contractor shall notify the Engineer in writing that the work will be ready for final inspection on a definite date, which shall be stated in such notice. The notice will be given at least ten (10) days prior to the date stated for final inspection and bear the signed concurrence of the representative of the Authority having charge of inspection. If the Engineer determines that the status of the improvements is as represented, he will make the arrangements necessary to have final inspection commenced on the date stated in such notice, or as soon thereafter as is practicable. The inspection party may include representatives of the Authority, the City of New Haven, or any other party or parties the Authority deems necessary.

144. DEDUCTION FOR UNCORRECTED WORK

If the Authority in its sole discretion decides not to require the Contractor to correct work not completed in accordance with the Contract Documents, the Contract Price shall be reduced by an amount agreed to by the Contractor and the Authority. In the event the parties cannot reach agreement, the reduction amount issue shall be resolved in accordance with Section 141 - DISPUTES.

145. TERMINATIONS AND DELAYS

a. Termination of Contract. If the Contractor shall be adjudged a bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver shall be appointed on account of his insolvency, or if he should fail to make prompt payment to subcontractors or for material or labor, or if he refuses or fails to prosecute the work with such diligence as will insure its completion within the time specified in these Contract Documents, or if the Contractor should otherwise be guilty of a substantial violation of a provision of the Contract, then the Authority may, without prejudice to any other right or remedy and after giving the Contractor seven (7) days written notice, terminate the Contractor's right to proceed with the work. Upon such termination, the Authority may take over the work and prosecute the same to completion by contract or otherwise and the Contractor and his sureties shall be liable to the Authority of any additional cost incurred by the Authority in its completion of the work, and they shall be liable to the Authority for liquidated damages for any delay in the completion of the work, as provided in these Contract Documents. If the Contractor's right to proceed is terminated, the Authority may take possession of and utilize in completing the work such materials, tools, equipment and plant as may be on the site of the work and necessary therefor.

b. Excusable Delays. The right of the Contractor to proceed shall not be terminated for any delays in the completion of work due:

1. To any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools or labor by reason of war, National Defense, or any other national emergency;

2. To unforeseeable causes including but not restricted to, acts of God or of the public enemy, fires, floods, epidemics, quarantine restrictions, freight embargoes effecting delivery of materials necessary for completion of the contract work when substitute materials are equally unavailable, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions; and

3. To any delay of any subcontractor occasioned by any of the causes specified in sub-paragraphs 1 and 2 of this paragraph "b".

Provided, however, that the Contractor immediately notifies the Authority, in writing, upon realization of such delay, of the cause of delay. Upon receipt of such notification, the Authority shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract the delay is properly excusable, the Authority shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

c. The Authority, for its convenience, at any time upon written notice to Contractor, may terminate or suspend the Contractor's right to proceed with the work. Upon receipt of notice of termination or suspension under this section, Contractor shall immediately cease work and commence demobilization or take other action as directed by the Authority. In the event of termination of the work under this subsection, Contractor shall be entitled to payment for work completed, overhead and profit on work completed, demobilization/cancellation costs incurred and materials left at the Project Area. In the event of a suspension of the work under this subsection, Contractor shall be entitled to payment of additional demobilization and mobilization costs incurred.

146. GENERAL GUARANTY

Neither the final certificate of payment, nor any provision in the Contract, nor partial or entire use of the improvements embraced in this Contract by the Authority or the public shall constitute an acceptance of work not done in accordance with the Contract, or relieve the Contractor of liability in respect to

any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of one (1) year from the date of final acceptance of the work, unless otherwise specified. The Authority will give notice of defective materials and work with reasonable promptness.

GENERAL CONDITIONS

PART II

Revised July 16, 2025

201. STATE OF CONNECTICUT WAGE SCHEDULE

The wages paid on this project shall be as shown on the State of Connecticut Labor Department “Prevailing Wage Rates” included in the Contract Documents or as otherwise referenced.

NOTE: For construction contracts with a value less than \$100,000, and State of Connecticut Prevailing Wage Rates have not been included in the Contract Documents, the Contractor and their subcontractors of any tier shall pay a minimum wage which shall be no less than the amount specified as the “Living Wage” for the City of New Haven as established by Article IX, Living Wage, of the City of New Haven Code of Ordinances. For contracts of \$100,000 or more, the minimum wage paid shall correspond to the State of Connecticut prevailing wages, or if applicable, the prevailing wages promulgated in accordance with the Federal Davis-Bacon Act, whether or not such wages rates are included in the Contract Documents, or the Living Wage, whichever is greater.

Pursuant to Connecticut General Statutes § 31-55a, the Contractor shall contact the State Labor Commissioner on or before July first of each year, for the duration of the Contract, to ascertain the prevailing rate of wage, on an hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done, and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each employee.

The prevailing wage rates applicable to the Contract are subject to annual adjustments each July 1st of each calendar year for the duration of the Contract. The Contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the Contractor’s responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor’s web site. The annual adjustments will be posted on the Department of Labor’s web page: www.ctdol.state.ct.us. For those without internet access, contact the Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109 at (860) 263-6790.

The City of New Haven Commission on Equal Opportunities locally administers Contractor compliance with prevailing wages, payroll reporting requirements, woman and minority workforce, and other matters related to City Ordinance Chapter 12 ½. Refer to City of New Haven/CEO website or call the Commission at 203-946-8160 for further information.

202. CONTRACTOR'S CERTIFICATES

Before any payment by NHPA to the Contractor under this Contract, the Contractor shall furnish NHPA with its certificate, substantially to the effect that the Contractor and each subcontractor have completed the work in accordance with the requirements of the Contract Documents, including wage and labor-standards provisions.

203. UNDERPAYMENT OF WAGES OR SALARIES

In case of underpayment of wages or salaries by the Contractor or by any subcontractor to laborers, mechanics or technical employees employed by the Contractor or subcontractor upon the work covered by this Contract, NHPA, in addition to such other rights as may be afforded it under this Contract, may withhold from the Contractor, out of any payments due the Contractor, so much thereof as NHPA may consider necessary to pay such laborers, mechanics or technical employees the full amount of wages or salaries required by the Contract.

204. COMPLAINTS, ETC., BY EMPLOYEES

No laborer, mechanic or technical employee to whom the wage, salary or other labor-standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding relating to the labor standards applicable under this Contract to his employer.

205. CLAIMS AND DISPUTES PERTAINING TO SALARY AND WAGE RATES

Claims and disputes pertaining to salary rates or to classifications of technical employees, wage rates or classifications of laborers and mechanics employed upon the work covered by this contract shall be promptly reported by the Contractor in writing to NHPA and Authorities Having Jurisdiction for decision, whose decisions shall be final with respect thereto.

206. LISTING ALL EMPLOYMENT OPENINGS WITH THE OFFICE OF THE CONNECTICUT STATE EMPLOYEMENT SERVICE

This contract is executed subject to the Governor's Executive Order No. 17, incorporated herein by reference, and is hereby made a part of this Agreement.

Governor's Executive Order No. 17 requires, inter alia, that all contractors and subcontractors shall list all employment openings with the office of the Connecticut State Employment Service in the area where the work is to be performed or where the services are to be rendered. Failure of the contractor to conform with the requirements of the Governor's Executive Order No. 17 and any orders, rules or regulations issued pursuant thereof, shall be a basis of termination of this Agreement.

207. RESIDENTS PREFERENCE IN WORK ON PUBLIC FACILITIES

The Contractor shall comply with the provisions of Connecticut General Statutes § 31-52a, a part of which is quoted as follows:

Section 2(b). Each contract for any such project covered by this section under the supervision of the state or any of its agents shall contain the following provision: "In employment of mechanics, laborers or workmen to perform the work specified herein, preference shall be given to residents of the state who are, and continuously for at least six [6] months prior to the date hereof have been, residents of this state, and if no such person is available then to residents of other states."

208. EMPLOYMENT OF APPRENTICES

Apprentices (to mechanics) will be permitted to perform work covered by this Contract only under a bona fide apprenticeship program approved by NHPA and Authorities Having Jurisdiction.

209. EMPLOYMENT OF CERTAIN PERSONS PROHIBITED

No person who, at the time, is serving sentence in a penal or correctional institution shall be employed on the work covered by this Contract.

210. NONDISCRIMINATION

The Contractor agrees and warrants that in the performance of this contract it will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, sex, mental retardation or physical disability, including but not limited to blindness, unless it is shown by such contractor that such disability prevents performance of the work involved in any manner prohibited by the laws of the United States or of the State of Connecticut, and further agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission concerning the employment practices and procedures of the Contractor as related the provisions of Public Act 78-148.

This contract is subject to the provisions of Executive Order No. 3 of Governor Thomas J. Meskill promulgated June 16, 1971 and, as such, this contract may be cancelled, terminated, or suspended by the State Labor Commissioner for violation of or non-compliance with said Executive Order No. 3, or any state or federal law concerning nondiscrimination, notwithstanding that the Labor Commissioner is not a party to this contract. The parties to this contract as part of the consideration hereof, agree that Executive Order No. 3 and the Guidelines and Rules implementing Executive Order No. 3 are incorporated herein by reference and made a part thereof. The parties agree to abide by said Executive Order and the Guidelines and Rules implementing Order No. 3 and agree that the State Labor Commissioner shall have continuing jurisdiction in respect to contract performance in regard to nondiscrimination, until the contract is completed or terminated prior to completion.

The Contractor agrees as part consideration hereof, that this Contract is subject to the Guidelines and Rules issued by the State Labor Commissioner to implement Executive Order No. 3, and that he will not discriminate in his employment practices or policies, will file all reports as required, and will fully cooperate with the State of Connecticut and the State Labor Commissioner.

211. EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Contract, the Contractor agrees:

- (a) To comply with all provisions of Executive Order 11246, Executive Order 11375, and Executive Order 12138, the Connecticut Fair Employment Practices Act, and the City of New Haven Contract Compliance Ordinance Chapter 12 ½ as all are amended from time to time, including all standards and regulations which are promulgated by the government authorities who established such acts and requirements, and all standards and regulations are incorporated herein by reference;
- (b) Not to discriminate against any employee or applicant for employment because of race, color, religion, age, sex, gender identity or expression, sexual orientation, physical disability or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to race, color, religion, sex, gender identity or expression, sexual orientation, age, national origin, or physical disability. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising, layoff, or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship;
- (c) To post notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause in conspicuous places available to employees and applicants for employment;
- (d) To state, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, gender identity or expression, sexual orientation, age, national origin, or physical disability.
- (e) To send to each union or representative of workers with whom he/she has a collective bargaining agreement, or other contract or understanding, a notice advising the labor union or worker's representative of the Contractor's commitments under the equal opportunity clause of the City of New Haven, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The Contractor shall register all workers in the skilled trades, who are below the journeyman level, with the Connecticut Department of Labor, Office of Apprenticeship Training;
- (f) To utilize labor department and city sponsored manpower programs as a source of recruitment, and to notify the contract compliance unit and such programs of all job vacancies;
- (g) To take affirmative action to negotiate with qualified minority and women contractors for any work which may be proposed for subletting or for any additional services, supplied, or work which may be required as a result of this contract;

- (h) To cooperate with city departments in implementing required contract obligations for increasing the utilization of minority and women business enterprises;
- (i) To furnish all information and reports required by the City of New Haven contract compliance director pursuant to section 12 ½ -19 through section 12 ½ -32 of the City Ordinance and to permit access to its books, records and accounts by the contracting agency, the contract compliance officer, and the secretary of labor for purposes of investigation to ascertain compliance with the program;
- (j) To take such action, with respect to any subcontractor, as the city may direct as a means of enforcing the provisions of subparagraphs (a) through (m) herein, including penalties and sanctions for noncompliance, provided however that, in the event the Contractor becomes involved in or is threatened with litigation as a result of such direction by the city, the city will intervene in such litigation to the extent necessary to protect the interest of the city and to effectuate the City's equal employment opportunity program. In the case of contracts funded directly or indirectly, in whole or in part, under one (1) or more federal assistance programs, the Contractor or the city may ask the United States to enter into such litigation to protect the interest of the United States;
- (k) To file, along with its subcontractors, if any, compliance reports with the city and NHPA in the form and to the extent prescribed in the contract by the contract compliance director of the city. Compliance reports filed at such times as directed shall contain information as to the employment practices, policies, programs and statistics of the Contractor and its subcontractors, if any;
- (l) To include the provisions of subparagraphs (a) through (m) of this equal opportunity clause in every subcontract or purchase order so that said provisions will be binding upon each such subcontractor or vendor;
- (m) That a finding, as hereinafter provided of a refusal by the Contractor, or subcontractor, to comply with any portion of this program as herein stated and described, may subject the offending party to any or all of the penalties;
 - (1) Withholding of all future payments under the involved public contract to the Contractor in violation until it is determined that the Contractor, or subcontractor is in compliance with the provisions of the contract;
 - (2) Refusal of all future bids for any public contract with the city, or any of its departments or divisions, and NHPA until such time as the Contractor, or subcontractor, is in compliance with the provisions of the contract;
 - (3) Cancellation of the public contract;
 - (4) Recovery of specified monetary penalties;
 - (5) In case of substantial or material violation, or the threat of substantial or material violation, of the compliance procedure or as may be provided for by contract, appropriate equitable or legal proceedings may be brought to enforce these provisions against contractors; subcontractors, or other organizations, individuals or groups who directly or indirectly are not in compliance with the policy as herein outlined.

212. NHPA COMMUNITY SUBCONTRACTOR UTILIZATION

In performing the Contract, the Contractor shall comply with the following, as more fully described in **the Instructions to Bidders/Proposers**:

- a. The utilization of DAS-certified Small Business Enterprises (“SBE”) as **subcontractors and/or suppliers of materials** for a requirement of at least **30% of the Contractor’s entire contract value**;
- b. The utilization of DAS-certified Minority Owned Business Enterprises (“MBE”), Women Owned Business Enterprises (“WBE”) and/or Disabled Owned Business Enterprises (“DisBE”) as **subcontractors and/or suppliers of materials** for a requirement of at least **25% of the Contractor’s entire contract value**. Please note that the MBE, WBE, and/or DisBE are **part of** the DAS-certified Small Business Enterprises; and
- c. Independent of the SBE/MBE/WBE/DisBE requirements herein, **a minimum of ten percent (10%) of the Contractor’s entire contract value must include businesses having a place of business within the City of New Haven limits**. If the Contractor (i.e., prime bidder) has a place of business within the City of New Haven limits, then the relevant percentage is calculated by deducting all of the subcontracts and suppliers of materials who do not have a place of business within the City of New Haven.

The Contractor shall submit with each invoice an updated *Community Subcontractor Utilization Program Monthly Payment Status Report* using form provided.

Refer to *New Haven Parking Authority Community Subcontractor Utilization Program* (enclosed) for additional information.

213. MINORITY AND WOMEN EMPLOYMENT WORKFORCE REQUIREMENTS

In accordance with Chapter 12½ of the Code of Ordinances of the City of New Haven, the following minimum minority and women workforce employment percentages are required, unless otherwise approved by the City of New Haven Commission on Equal Opportunity:

Minority workforce requirement: 25%
Women workforce requirement: 6.9%
Apprentice workforce requirement 15% (50% of which must be 1st year apprentice)

Additional information on minority and women employment requirements and resources is available from the *City of New Haven Commission on Equal Opportunities*, 200 Orange Street, New Haven, CT 06510, telephone 203-946-8160. Contact *New Haven Works* at newhavenworkspipeline.org, telephone 203-562-9000, for construction worker employment resources. Copies of the Code of Ordinances Chapter 12 ½ are available from the are available from the City / Town Clerk, the Commission on Equal Opportunities or by the following link: https://www.newhavenct.gov/gov/depts/equal_opportunities/about/ordinance.htm .

214. SELF-PERFORMANCE

In any contract awarded, the Prime Contractor/General Contractor and Subcontractor(s) must comply with General Statutes § 4a-60g (e), which provides that:

“The awarding authority shall require that a contractor or subcontractor awarded a contract or a portion of a contract under this section perform not less than thirty per cent of the work with the workforces of such contractor or subcontractor and shall require that not less than fifty per cent of the work be performed by contractors or subcontractors eligible for awards under this section. A contractor awarded a contract or a portion of a contract under this section shall not subcontract with any person with whom the contractor is affiliated. No person who is affiliated with another person shall be eligible for awards under this section if both affiliated persons considered together would not qualify as a small contractor or a minority business enterprise under subsection (a) of this section. The awarding authority shall require that a contractor awarded a contract pursuant to this section submit, in writing, an explanation of any subcontract to such contract that is entered into with any person that is not eligible for the award of a contract pursuant to this section, prior to the performance of any work pursuant to such subcontract.”

215. SERVICE OF PROCESS

The successful bidder, if not a resident of the State of Connecticut, or in the case of a partnership, the partners, if not residents, hereby appoints the Secretary of State of the State of Connecticut, and its successors in office as agent for service of process for any action arising out of or as a result of this contract; such appointment to be in effect throughout the life of this contract, and six (6) years thereafter.

216. “OR EQUAL” CLAUSE

Whenever a material or article required is specified or shown on the drawings by using the name of the proprietary product or of a particular manufacturer or vendor, any material or article which will perform adequately the duties imposed by the general design may be considered equal and satisfactory providing the material or article so proposed is of equal substance and function in NHPA’s opinion. It shall not be purchased or installed without written approval by NHPA. In all cases, new materials shall be used in the project. If two (2) or more brands, makes or materials, devices or equipment are shown or specified, each should be regarded as the equal of the other. Any other brand, make of material, device or equipment, which in the opinion of NHPA or its authorized agent is the recognized equal of that specified, considering quality, workmanship and economy of operations and is suitable for the purpose intended, may be acceptable.

217. AMERICANS WITH DISABILITIES ACT

The Contractor and all of the Contractor’s subcontractors shall comply with all applicable provisions of the Americans with Disabilities Act.

**NEW HAVEN PARKING AUTHORITY
COMMUNITY SUBCONTRACTOR UTILIZATION PROGRAM**

Approved March 15, 2021

Sec. 1. Name.

This program shall be known as the New Haven Parking Authority Community Subcontractor Utilization Program.

Sec. 2. Scope.

The provisions of this program shall apply to all NHPA construction contracts, except those that are financed by the City of New Haven or any other governmental entity and/or agency (i.e. State or Federal), under which a different set of provisions may apply.

This program applies to construction contracts that are valued at a minimum of \$25,000.00.

Sec. 3. DAS Certification.

Small Business Enterprise (SBE), Minority-owned Business Enterprise (MBE), Women-owned Business Enterprise (WBE), or Disabled-owned Business Enterprise (DisBE) must be certified by the State of Connecticut Department of Administrative Services (DAS).¹

Sec. 4. NHPA Subcontractor Outreach.

- (a) *Purpose.* The purpose of this section is to nurture small and minority **Subcontractors and Suppliers of Materials** who have the potential for long-term, sustainable success on a level playing field.
- (b) *Outreach.* NHPA outreach includes a variety of methods, including, but not limited to the following:
 - (1) Post bid or proposal opportunity information on the NHPA publicly accessible website;
 - (2) Announcement in the New Haven Register and three relevant targeted publications aimed at small and minority contractors: *Inner City News*, *La Voz*, and the *New Haven Independent*;

¹Small Business Enterprise a.k.a. Small Contractor is defined as any contractor, subcontractor, manufacturer, service company or nonprofit corporation (A) that maintains its principal place of business in the state, (B) that had gross revenues not exceeding fifteen million dollars in the most recently completed fiscal year prior to such application, and (C) that is independent. Small contractor does not include any person who is affiliated with another person if both persons considered together have a gross revenue exceeding fifteen million dollars. See Connecticut General Statutes § 4a-60g.

"Minority" groups are defined in [Section 32-9n](#) of the Connecticut General Statutes as "(1) Black Americans, including all persons having origins in any of the Black African racial groups not of Hispanic origin; (2) Hispanic Americans, including all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; (3) all persons having origins in the Iberian Peninsula, including Portugal, regardless of race; (4) women; (5) Asian Pacific Americans and Pacific islanders; or (6) American Indians and persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification." An individual with a disability is also a minority business enterprise as provided by Connecticut General Statutes § [4a-60g](#) of the Connecticut General Statutes.

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- (3) E-mail the City of New Haven Office of the Small Construction Development program to inform of any relevant bids or proposals;
- (4) E-mail the City of New Haven Commission on Equal Opportunities to inform of any relevant bids or proposals;
- (5) E-mail the Minority Construction Council to inform of any relevant bids or proposals;
- (6) E-mail the Greater New Haven Business and Professional Association to inform of any relevant bids or proposals;
- (7) E-mail the New Haven Regional Contractor's Alliance to inform of any relevant bids or proposals;
- (8) E-mail the Greater New England Minority Development Council to inform of any relevant bids or proposals;
- (9) E-mail notification to the Connecticut Women's Business Development Council to inform of any relevant bids or proposals;
- (10) E-mail notification to interested contractors within the relevant industry segment;
- (11) Notification by the Minority Construction Council to its members or interested parties to provide an overview of the bids or proposals;
- (12) Post bid or proposal opportunity information in the State of Connecticut Department of Administrative Services Contracting Portal (DAS Contracting Portal);

Sec. 5. Community Subcontractor Utilization Requirements.

Bidders must submit with their Bid on forms provided a list of their Intended Subcontractors, together with any other additional applicable requirements (i.e. CHRO compliance on State funded projects), including:

- (a) the use of DAS-certified Small Business Enterprises ("SBE") as **Subcontractors and/or Suppliers of Materials** for a requirement of at least 30% of the Bidder's entire contract value;
- (b) the use of DAS-certified Minority Owned Business Enterprises ("MBE"), Women Owned Business Enterprises ("WBE") and/or Disabled Owned Business Enterprises ("DisBE") as **Subcontractors and/or Suppliers of Materials** for a requirement of at least 25% of the Bidder's entire contract value. Please note that the MBE, WBE, and/or DisBE are **part of** the DAS-certified Small Business Enterprises; and
- (c) independent of the SBE/MBE/WBE/DisBE requirements herein, a minimum of 10% of the Bidder's entire contract value must include businesses having a place of business within the City of New Haven limits.
- (d) In order to satisfy the requirement for use of this Community Subcontractor Utilization Program, Bidders shall submit with their Bid, on forms provided (or using additional sheets if necessary), the Intended Community Subcontractor Utilization Certificate indicating:

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- i. The name, address and contact person of each Subcontractor the bidder will use.
- ii. The name, address and contact person of each Supplier of Materials the bidder will use in order to satisfy the requirement for use of this Community Subcontractor Utilization Program. (For Suppliers of Materials, only list those Suppliers of Materials for which the Bidder will use in order to satisfy the requirement for use of SBE/MBE/WBE/DisBE or New Haven-based.)
- iii. The categories of the Subcontractors and/or Suppliers of Materials utilized (i.e. SBE, MBE, WBE, DisBE, any other Subcontractors)
- iv. The nature of the work to be undertaken by each Subcontractor or Supplier of Materials.
- v. The dollar value of each Subcontract or Supplier of Materials.
- vi. The percentage of Bidder's entire contract dollar amount to be expended for SBEs;
- vii. The percentage of Bidder's entire contract dollar amount to be expended for MBEs, WBEs and DisBEs.
- viii. The percentage of Bidder's entire contract dollar amount to be expended for businesses having a place of business within the City of New Haven limits.

Note: In the event the Prime Contractor/General Contractor is a SBE, MBE, WBE or DisBE, its status as such does NOT contribute to the SBE, MBE, WBE and DisBE Subcontractor requirements.

Additional Note: If the Bidder (i.e., prime bidder) has a place of business within the City of New Haven limits, then the relevant dollar amount is calculated by deducting from the Bidder's entire contract value, the value of the subcontracts and suppliers of materials who do not have a place of business within the City of New Haven.

Bidders shall also submit with their bid a brief description of the experience and ability of each of the Subcontractors and Suppliers of Materials together with the names, telephone numbers, and e-mail addresses of at least three (3) references for each Subcontractor and Suppliers of Materials.

If a bidder is unable to meet these minimum community participation requirements, then the bid shall be deemed non-responsive. However, in the event that a bidder **has met** these minimum community participation requirements, the bidder may be required to submit to NHPA its efforts concerning compliance, upon request by NHPA.

For reference: the City of New Haven's Office of Small Contractor Development Program's website is: https://www.newhavenct.gov/gov/depts/small_contractor/default.htm and its email contact is: lsnyder@newhavenct.gov; the following is a link to the Small Business Directory to

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search for small and minority business enterprises registered with the State of Connecticut Department of Administrative Services (DAS): <https://biznet.ct.gov/SDSearch/SDSearch.aspx>

Sec. 6. Exceptions.

- (a) In the event that a construction contract is funded by the City of New Haven, state or federal government or other applicable government entity and/or agency thereof or sources other than the NHPA, the provisions of this program may not apply.
- (b) The utilization requirements may not apply to the following procurements:
 - (1) Construction services that NHPA determines are available only from a sole source and the prospective contractor is not currently disqualified from doing business with NHPA, or from doing business with any governmental agency.
 - (2) Construction contracts determined by NHPA that are necessary to respond to an emergency situation that is a threat to the public health, safety or welfare.
 - (3) Construction contracts determined by NHPA that are made through cooperative purchasing arrangements with other governmental or private entities when, in the judgment of NHPA, such contracts are in the best interest of NHPA and such arrangements involve competitive purchasing procedures.
 - (4) Construction contracts made in a manner approved by NHPA where it would not be practicable or in the best interest of NHPA to proceed in accordance with provisions of this program and where NHPA shall find that the making of such a contract in such manner is in the best interest of NHPA.

Sec. 7. Protest procedure.

- (a) If at the time of a bid opening there is an apparent low responsible bidder that should be awarded an NHPA construction contract in accordance with the provisions of this program but an unsuccessful party (a "protesting party") is of the opinion that the apparent low bidder did not comply with the provisions of this program, then the protesting party or parties shall have a period of three (3) calendar days from the date on which the bids were publicly opened in order to protest such award.
- (b) Any such protest shall be made in writing and received by the NHPA representative in charge of the project by not later than 3:00 p.m. on the third **calendar** day following the date of the bid opening.
- (c) Upon timely receipt of such protest letter, the NHPA representative shall forward such protest letter to NHPA's Executive Director and its legal counsel.
- (e) Once the protest is reviewed, a written opinion as to whether the apparent low bid or bidder met the requirements of this program shall be issued. The written opinion shall be sent to both the protesting party or parties and the apparent low bidder, and a copy of said opinion shall be maintained by NHPA.

Sec. 8. Administration.

- (a) The Executive Director of NHPA shall be responsible for the overall administration of this program.

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- (b) This program is separate and distinct from the requirements of Article II of Chapter 12 ½ of the City of New Haven's Code of Ordinances as applicable to NHPA on City of New Haven-related Construction Contracts.



Requirements for Good Faith Efforts

NHPA analyzes a Proposer's good faith efforts to solicit Small Business Enterprises ("SBE") and/or Minority Owned Business Enterprises ("MBE"), Women Owned Business Enterprises ("WBE") and/or Disabled Owned Business Enterprises ("DisBE") Minority Business Enterprises ("MBE") for its *Community Subcontractor Utilization Program*.

In performing the Contract, the Contractor shall comply with the following, as more fully described in **the Instructions to Bidders/Proposers**:

- a. The utilization of DAS-certified Small Business Enterprises ("SBE") as **subcontractors and/or suppliers of materials** for a requirement of at least **30% of the Contractor's entire contract value**;
- b. The utilization of DAS-certified Minority Owned Business Enterprises ("MBE"), Women Owned Business Enterprises ("WBE") and/or Disabled Owned Business Enterprises ("DisBE") as **subcontractors and/or suppliers of materials** for a requirement of at least **25% of the Contractor's entire contract value**. Please note that the MBE, WBE, and/or DisBE are **part of** the DAS-certified Small Business Enterprises; and
- c. Independent of the SBE/MBE/WBE/DisBE requirements herein, **a minimum of ten percent (10%) of the Contractor's entire contract value must include businesses having a place of business within the City of New Haven limits**. If the Contractor (i.e., prime bidder) has a place of business within the City of New Haven limits, then the relevant percentage is calculated by deducting all of the subcontracts and suppliers of materials who do not have a place of business within the City of New Haven.

The factors that NHPA considers to determine whether a contractor has made its best good faith effort to provide opportunities for DAS-certified S/M/W/DisBEs for this project include, but are not limited to, the following:

- Has the contractor actually achieved the required percentages? What good faith efforts has the contractor made to achieve those percentages?
- Evidence of taking reasonable steps to achieve the required percentages include, but are not limited to, the following:
 - Consulting with varied resources, including the State of Connecticut [DAS Supplier Diversity Program](#) to locate S/M/W/DisBEs
 - The City of New Haven's Office of Small Contractor Development Program's website address is: <https://www.newhavenct.gov/government/departments-divisions/small-contractor-development#ad-image-7> and its email contact is: lsnyder@newhavenct.gov



- The Minority Construction Council, Inc. is also a resource to assist in finding MBEs. Their website address is <https://mccforct.org/>
 - Allowing minority and small businesses to competitively bid against each other by soliciting for the trades-related work, materials, and non-trades-related services, or provide an explanation as to why the trades-related work, material, or non-trades-related service was not solicited to S/M/W/DisBEs
 - Using concise responses for bid results (avoid vague responses such as “did not bid” or “no response”; use responses to show follow-up)
 - Soliciting bids only from those subcontractors and/or vendors who can provide the trades-related work, material, or non-trades-related service
 - Including all trades-related work, materials, and non-trades-related services within the company’s bidding process or provide an explanation with reference as to why the trades-related work, materials, and non-trades-related services were not solicited to S/M/W/DisBEs
 - Breaking larger jobs into smaller packages.
- NHPA will also look for “red flags” that might show lack of good faith. These will be looked at on a case-by-case basis. These include, but are not limited to, the following:
 - Incomplete submissions
 - Inaccurate submissions
 - Submissions lacking appropriate specificity
 - Soliciting companies, but not awarding any, for a specific package of trades-related work, materials, or non-trades-related services
 - Soliciting from contractors that do not actually provide the good or service needed
 - Soliciting companies that are geographically distanced from the project and, therefore, unlikely to bid, in lieu of soliciting S/M/W/DisBEs in closer proximity
 - Failing to solicit necessary trades-related work, materials, and non-trades-related services
 - Alleging solicitations to companies that were not actually solicited
 - Awarding a contractor that was not solicited
 - Unaccounted for contract money
 - False submissions
 - Proposers are reminded that one of the criteria in evaluating the proposals is use of S/M/W/DisBE subcontractors.

SPECIAL CONDITIONS

SPECIAL CONDITIONS

PARKING ACCESS & REVENUE CONTROL SYSTEM REPLACEMENT AT NEW HAVEN PARKING AUTHORITY FACILITIES NEW HAVEN, CONNECTICUT NHPA PROJECT #24-029

301. PROJECT SITE

A. The project sites are:

- Air Rights Garage, 60 York Street;
- Crown Street Garage, 213 Crown Street;
- Temple Medical Garage, 230 George Street;
- Temple Street Garage, One Temple Street;
- Granite Square Garage, 690 State Street;
- 270 State Street Garage, 270 State Street;
- Union Station Garage, 40 Union Avenue;
- Elm/Orange Lot, 32 Elm Street;
- State/Pulaski Lot, State Street opposite Eld Street;
- State/Trumbull Lot, 711 State Street;
- State/Wall Lot, 10 Wall Street;
- State/Chapel Lot, 253 State Street
- State/Fair Lot, 183 State Street;
- Whalley/Blake Lot, 919 Whalley Avenue;
- Under Air Rights Lot, under 60 York Street

all in New Haven, Connecticut. **Contractor shall be aware that the Union Station Garage, which NHPA manages, is adjacent to live, active railroad tracks. The Contractor shall not adversely impact the railroad track property. Also, there is a major underground telecommunications line in the State/Wall Lot, which shall not be disturbed.**

B. All contractors submitting proposals for this work shall first examine the site and all conditions thereon. All proposals shall take into consideration all conditions as may affect the work under this contract. All Contractors shall be aware that the Union Station Building and Garage Project Site is an Historic Building, and Contractor shall be cognizant of supplemental requirements associated with “historic structures” as described in associated project specifications or as detailed in other applicable references. Union Station Building and Garage are also considered a key rail station under applicable ADA guidelines. Although certain references are noted within the project specifications, the Contractor shall be aware that these references are listed for informational purposes only, and the Contractor shall be held solely responsible for being knowledgeable of ALL applicable codes and regulations.

C. The Contractor is not allowed on the train platforms or track areas unless authorized in writing by the Railroads.

D. The New Haven Parking Authority (NHPA) shall be the Contracting Agency for this project. For purposes of this project, use of the word "Owner," as used within these documents, shall refer to the NHPA.

E. Verify all grades, lines, levels and dimensions, as shown on the drawings, and report any errors or inconsistencies discovered in the above to the Engineer before commencing work.

302. STATEMENT OF WORK

The work for this project includes, but is not limited to: removal of existing equipment and installation of a new state-of-the-art Parking Access and Revenue Control System, refurbishment of designated booths inclusive of painting, metal repair, roofing and related finishes, installation of new HVAC and lighting with associated ductwork repairs and replacement, design and install integratable security cameras and door control system for all Garage pedestrian entrances, miscellaneous coordination, together with all incidental work thereto and in accordance with the Proposal Documents, as well as preventative maintenance and repair services at the New Haven Parking Authority facilities involving 7 parking garages and 8 surface lots.

303. PARKING SPACE RESTRICTIONS

The Contractor shall schedule and arrange its work to minimize the number of parking spaces disturbed and/or taken out of service (including those required for traffic control), at any given time. The number of parking spaces and hours of availability allowed to be disturbed and/or taken out of service for construction activities is limited and must be coordinated with NHPA in advance. Once disturbed and/or taken out of service, the affected areas shall be made fully operational by the Contractor prior to its disturbing and/or taking out of service any other areas. The Contractor shall coordinate its construction activities with NHPA.

The Contractor shall post signs suitably in advance identifying parking areas to be taken out of service for construction activities. The Contractor shall coordinate with NHPA the relocation of any vehicles should they need to be removed from the proposed work area.

Once disturbed and/or taken out of service, the affected parking spaces shall be made operational by the Contractor prior to its disturbing and/or taking out of service any other spaces. The Contractor is to coordinate all disruption of parking space activities with NHPA. Note that available parking spaces may not necessarily be all together and next to one another, and flexibility in sequence of work is required.

304. WORK HOURS AND RELATED RESTRICTIONS

The Contractor's construction activities have certain work hour restrictions, as follows:

- A. Work shall be coordinated with the NHPA, City and State, and/or other affected parties, as applicable.
- B. The Contractor shall comply with all applicable noise ordinances. In general, noise generated by construction activities per applicable noise level standards is permissible during the hours of 7:00 AM and 10:00 PM on Mondays through Saturdays, and 9:00 AM through 9:00 PM on Sundays, or as otherwise prescribed by law.
- C. At Union Station Campus, no work in the public access areas will be allowed from November 21st through January 1st or on holidays and weekends before and after holidays, unless otherwise authorized in writing by NHPA. The Contractor shall coordinate activities with NHPA.
- D. Work performed that may impact parking operations, traffic flow, pedestrian access or tenant spaces must be performed at only those times that minimize such impact and as authorized in writing by NHPA. Work shall be properly coordinated and sequenced with NHPA and affected parties as applicable.
- E. Work which may affect pedestrian access to any of facility's elevators shall require special coordination with NHPA. All costs associated with any special coordination, including but not limited to placement of temporary directional signage needed to direct patrons to alternative means of egress shall be borne by the Contractor and are considered to be included in the Contract Price. All temporary signage shall be as approved by NHPA. Contractors shall be restricted to temporarily eliminating access to elevators on only one level at a time.
- F. Elevator service and stairways are vitally important for pedestrian travel in the facilities. Work involving the elevators and stairs requires special coordination with NHPA. The Contractor shall maintain access to the elevators to the maximum extent practical but should conditions mandate an impact to elevator access, the Contractor shall be restricted to temporarily limiting access to elevators on only one level and the Contractor may take out of service no more than one elevator car at one time and on a schedule approved in advance by NHPA, and patrons shall be notified and redirected with temporary directional signage to means of access and egress alternative accordingly. If an elevator is out of service, access to the adjacent stair shall be maintained to the extent possible. Only one stair may be taken out of service in each facility at one time and on a schedule approved in advance by NHPA, and patrons shall be notified and redirected with temporary directional signage to alternative means of access and

egress accordingly to a nearby elevator and to a nearby stair. All costs associated with the elevator and stair closures are to be borne by the Contractor and are considered to be included in the Contract Price.

- D. Contractor shall provide barricades, scaffolding, or other required equipment to protect and maintain pedestrian access and egress within the Facilities, within the commercial and occupied spaces, and on the adjacent walkways/sidewalks and other affected areas. Pedestrian access and egress shall be maintained at all times.

All temporary partitions shall be designed to control dust and debris and attenuate noise on all sides of the garage and to prevent unauthorized access into the work area. The Contractor shall obey all applicable noise laws. The Contractor shall also use noise dampening/sound absorbing insulation in perimeter partitions to abate noise in the immediate vicinity and to nearby residential apartments and businesses. The partitions shall protect other areas within and near the facility from water, dust and flying debris. The Contractor shall provide a dust collection/filter system to prevent dust and debris from escaping in the work area ventilation exhaust as applicable. All drainage systems shall be protected from damage and shall be maintained in functioning order.

- F. Work affecting the commercial or occupied spaces or privately-owned areas shall be coordinated in advance and performed at times that minimize disruption. Permission for work in privately-owned areas must be secured prior to occupying them.

305. TRAFFIC CONTROL PLAN

The Contractor shall submit for approval immediately after execution of the Agreement, a carefully prepared Traffic Control Plan, conforming to the requirements of the Contract and in accordance with the Drawings and Specifications. This plan should show:

- A. The proposed dates of starting and completing each of the various phases of the Work
- B. The Total number of parking spaces impacted by the Work
- C. The vehicular and pedestrian traffic flow during construction, both external and internal to the Project Area
- D. Barricades, signs, markings and other traffic control devices to be used for the maintenance and protection of vehicular and pedestrian traffic, both external and internal to the Project Area. Provision of signage shall include all temporary signage for use when illuminated signage may be out of service

The Contractor's special attention is called to the fact that the Project Site(s) will be in active use while the Work is in progress and the Traffic Control Plan must address this condition.

The Contractor shall provide maximum vehicular and pedestrian mobility through and/or near the Project Area. The Contractor shall coordinate, as required, with the New Haven Parking Authority, applicable City and State agencies and departments, and all other applicable parties, as well as provide extra-duty police officers, as required by the City of New Haven and/or State of Connecticut, to maintain proper vehicular traffic on the surrounding streets. No traffic lane shall be taken out of service without appropriate approvals and permits having been obtained by the Contractor from the Authorities Having Jurisdiction. The obtaining of said permits, inclusive of, but not limited to, all necessary street and sidewalk obstruction permits, shall be solely the responsibility of the Contractor.

NOTE: The City of New Haven and State of Connecticut also requires a copy of the Traffic Control Plan together with other information on protection and safety measures the Contractor will implement.

All traffic control devices shall comply with the latest edition of the Manual on Uniform Traffic Control Devices.

All costs associated with the Traffic Control Plan are to be borne by the Contractor and are considered to be included in the Contract Price.

306. CONTRACTOR'S COMPANY VEHICLE PARKING

Parking is limited at the Project Site. Contractor's company work vehicles (no employee vehicles) will be allowed at the Project Site only at designated locations. The Contractor must provide NHPA with a list of company work vehicles requiring the need to park at the site, and NHPA may issue keycards or similar devices for the Contractor's use; keycards shall be returned to NHPA upon completion of the project. All Contractor parking is at the Contractor's own risk. Violators parking in unauthorized areas are subject to having their vehicle towed at their expense. Contractor parking is a privilege subject to suspension if abuses are detected. NOTE: there are weight restrictions and limited vertical clearances in the parking garage.

307. SEQUENCE OF OPERATIONS

- A. **Only one entry/exit point is allowed out of service per Facility at a time but Contractor may work on multiple Facilities at a time.** Traffic must be maintained to and from the facility at all times, even for situations where there is only one entry/exit point.

- B. As soon as practicable (not more than 10 days) after the award of the contract, the Contractor shall furnish a man-power loaded construction schedule to the Engineer. Contractor will revise the schedule as work progress deviates from schedule or as needed in order to complete the work within the Time for Commencement and Completion or when requested by the Engineer.
- C. The Contractor shall, at all times, employ sufficient labor and equipment to facilitate the Work and to ensure that the project is completed on or before the time specified in Section 308, "Time for Commencement and Completion."
- D. All work is to be coordinated in advance with NHPA so as to not disrupt or conflict with operations of the parking areas, associated commercial space tenants, and privately-owned areas.
- E. The Contractor shall take measurements in the field to verify or supplement all grades, lines, levels and dimensions as indicated on drawings and shall be responsible for accurate fit of specified work. Contractor shall report any errors or inconsistencies discovered in the above to the Engineer before commencing work.
- F. The Contractor shall obtain and pay for all permits, licenses, certificates, inspections or other legal fees both permanent or temporary which are required for the execution of the contract.
- G. The Contractor shall coordinate its work with that of any other Contractors on site. The Contractor is advised that there may be other construction activities being performed at the Facilities, adjacent facilities, and surrounding streets and sidewalks during this construction project. The Contractor shall coordinate its work with that of any other Contractors on-site or otherwise impacted, and to the extent practical while maintaining a safe environment and safe work operations, the Contractor shall allow the other contractors to have access into the work area to perform their work. The work currently being performed is inclusive of, but not limited to, the following:
- Union Station Garage State-of-Good Repairs, Project #23-009. Construction anticipated to start summer 2025 and last several years.
 - Union Station Building State-of-Good Repairs, Project #23-020. Construction anticipated to start fall 2025 and last several years.
 - Union Station Enabling Project - Phase 1. Project #23-051. Construction anticipated to start spring 2026 and last several years.
 - Union Station Interior Wayfinding Signage, Project #23-054. Design is in progress.
 - Union Station East Lot Development. In proposal approval stage for development of parcel.
 - Union Station West Lot development. In early stages of design (30%).

- Union Station Area Geothermal Energy Network Project. In early stages of development.
- Union Station and State Street Station – CTDOT Platform and Canopy Project – in design.
- Air Rights Garage – lighting replace project and repair project – in design.
- Air Rights Garage – repairs and improvements project – in design.
- Crown Street Garage – commercial space demolition and white box – in design.
- Temple Street Garage - repair project – in design.
- 270 State Street Garage - repair project – in design.
- Elevator Modernization and Service, multiple facilities – in procurement stage.
- Other projects as may arise.

308. TIME FOR COMMENCEMENT AND COMPLETION

Regarding the Modernization work, the Contractor shall begin work under this Contract within ten (10) days from the date of the “Notice to Proceed” issued for the project and shall substantially complete all construction of the entire project within **Seven Hundred Thirty (730) calendar days** of the date of the Notice of Proceed. Contractor shall note that time for commencement and completion does not include potential shutdown of work due to winter weather.

309. LIQUIDATED DAMAGES FOR DELAY

A. The Contractor guarantees that it can and will complete the Work within the time limit stated in the Contract Documents, or within the time extended as provided elsewhere in the Contract Documents.

In as much as the damage and loss to NHPA, which will result from the failure of the Contractor to complete the project within **730 calendar days**, cannot be ascertained with precision, the Contractor and NHPA agree that the liquidated damage sum listed in subparagraph “B” below for each day of which the Contractor shall fail to complete the work or any part thereof in accordance with the provisions hereof is a reasonable sum and that such liquidated damages are not a penalty. NHPA will deduct and retain out any money due or to become due hereunder, the amount of liquidated damages, and in case those amounts are less than the amount of liquidated damages, the Contractor shall be liable to pay the difference upon demand by NHPA.

B. The Contractor agrees to pay NHPA a sum of **\$500.00** (“the Liquidated Sum”) for each calendar day beyond the established project completion date that the work remains incomplete.

310. TEMPORARY ELECTRIC LIGHT AND POWER

- A. The Contractor shall provide and pay all costs connected with the furnishing of adequate light and power during construction, including that for power tools, equipment, appliances, barricades, storage sheds, etc.
- B. The Contractor shall furnish all temporary power sources, wiring, meters, transformers, fixtures, extension cords, lamps, etc., and shall remove them upon completion. All temporary light and power shall be in accordance with code requirements.
- C. The Contractor may use the electrical power supplied to the facility for the Contractor's operations, free-of-charge.

311. CONTRACTOR'S OFFICE AT THE PROJECT SITE

Contractor need not maintain a field office at the Project sites. As a minimum, Contractor shall have an e-mail address where communications may be received as well as Contractor shall provide a mobile phone number at which Contractor can be reached at all times. Contractor's superintendent shall have in its use a smartphone with email access during the day to facilitate electronic communications.

312. STORAGE SPACE

No storage space shall be allocated for use by the Contractor. Any need for storage on-site must be provided by the Contractor and properly coordinated with NHPA and applicable Authorities Having Jurisdiction prior to start of work. Storage of any construction material, equipment and project records or associated paperwork is at the Contractor's own risk and Contractor shall suitably secure any such materials and store them in accordance with all applicable laws, rules and regulations, and not exceed any weight limits.

313. ADDITIONAL INSURANCE REQUIREMENTS AND INDEMNITY

In addition to the insurance requirements of General Conditions Section 111, the following requirements shall also apply:

- A. The following shall be listed as additional insureds to all policies on a primary and non-contributory basis for all insurance coverages required as set forth below to the extent allowed by law: the New Haven Parking Authority/Park New Haven, the City of New Haven, the State of Connecticut, Desman, Inc., Turner Construction Company, 101 College Street, LLC, Temple MOB, LLC, Yale New Haven Hospital, Smilow Cancer Hospital, Yale University School of Medicine, Medical Center

Reality, Daymarr Realty, LLC, Acorn Property Management Group, and their respective officers, representatives, agents, servants, employees, successors and assigns. NHPA reserves the right to add entities to this list.

B. With respect to the operations performed by the Contractor and those performed for the Contractor by its subcontractors, the Contractor shall carry, and/or require its subcontractors to carry, for the duration of the Contract, with the required additional insureds, the minimum liability insurance coverage set forth in the following items “B(1)” through “B(8)” at the Contractor’s expense:

1. **Worker’s Compensation and Employers’ Liability Insurance** as required by the laws of the State of Connecticut: Workers Compensation with Statutory Limits and Employers’ Liability with policy limit amounts not less than:
 - a. \$1,000,000 Each Accident (bodily injury by accident);
 - b. \$1,000,000 Disease – Policy limit (bodily injury by disease); and
 - c. \$1,000,000 Disease – Each Employee (bodily injury by disease).

When work is to be performed over or adjacent to navigable water, each Workers’ Compensation policy shall contain the U.S. Longshoreman’s and Harbor Workers’ Act endorsement with the limits in accordance with the laws of the United States.

2. **Builder’s Risk Insurance:** in an amount equal to or greater than the dollar value of the construction contract. The New Haven Parking Authority shall be named as Loss Payee. The City of New Haven and the State of Connecticut (as applicable) shall be listed as additional insureds.
3. **Owners’ Protective Liability Insurance:** for the benefit and in the name of each of the New Haven Parking Authority, the City of New Haven, and the State of Connecticut (as applicable), with policy limit amounts of not less than One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) aggregate.
4. **Commercial General Liability Insurance, including Contractual Liability Insurance,** for all damages arising out of bodily injuries to, or death of, all persons and/or out of injury to, or destruction of, property, with policy limit amounts not less than the following One Million Dollars (\$1,000,000) each occurrence, and, subject to that limit per accident, a total (or aggregate) limit of Two Million Dollars (\$2,000,000).
5. **Automobile Liability Insurance** covering the operation of all motor vehicles, including those hired or borrowed, that are used in connection with the Project for all damages arising out of bodily injuries to, or death of, all persons and/or out of

injury to, or destruction of, property, providing a One Million Dollars (\$1,000,000) combined single limit.

6. **Umbrella/Excess Liability** with limits of One Million Dollars (\$1,000,000) Each Occurrence and Aggregate. The Umbrella/Excess must apply over the Products & Completed Operations. This Item B(6) shall be in addition to any umbrella/excess liability insurance that the Contractor may secure to satisfy the minimum limits required for Item B(4) Commercial General Liability and Item B(5) Automobile Liability Insurance using Umbrella Liability Insurance.
7. In the event the performance of any Contract involves **environmentally regulated substances or hazardous material exposure(s)**, Contractor's **Pollution Liability Insurance** with respect to the work and activities of the Contractor and/or their subcontractors, including but not limited to handling, transporting or disposing of any hazardous substances and/or environmentally regulated materials and any sudden and/or non-sudden pollution or impairment of the environment, including clean-up costs and defense with limits of liability specifically written for such Contract in the amount of at least Five Million Dollars (\$5,000,000). The Contractor and/or their subcontractors shall comply with all federal, state, and/or local laws, rules and regulations and shall obtain any additional coverage required by federal, state, or local government agencies. The Contractor's Pollution Liability Insurance shall be in effect from the date of written notice to proceed authorizing the work relating to the hazardous substances or other environmentally regulated materials and extend through the completion of the work.
8. In the event the performance of any Contract involves **construction or demolition work** performed by Contractor or its subcontractor(s) within fifty (50) feet of the railroad right-of way or State-owned rail property, with applicability determined by the State of Connecticut Department of Transportation, **Railroad Protective Liability Insurance** providing coverage of at least Two Million Dollars (\$2,000,000) for each accident or occurrence resulting in damages from (1) bodily injury to or death of all persons and/or (2) injury to or destruction of property and subject to that limit per accident or occurrence, an aggregate coverage of at least Six Million Dollars (\$6,000,000) for all damages during the policy period, and with all entities falling within any of the following listed categories named as insured parties: (i) the owner of the railroad right-of-way, including the State of Connecticut, (ii) the owner of any railcar licensed or permitted to travel within that affected portion of railroad right-of-way, (iii) the operator of any railcar licensed or permitted to travel within that affected portion of the railroad right-of-way, and (iv) any other party with an insurable interest. If such insurance is required by the State of Connecticut Department of Transportation, the Contractor shall obtain (or require its subcontractor to obtain, as applicable) such insurance and submit evidence of the minimum coverage

indicated above to the NHPA and the City prior to the commencement of the rail-related work and/or activities. The Contractor or its subcontractor, as applicable, shall maintain such coverage until the work and/or activities is/are accepted. The following railroads have insurable interests including Metro-North Commuter Railroad Company, Metropolitan Transportation Authority (MTA), National Railroad Passenger Corporation (AMTRAK), CSX Transportation, Inc. & New York Central Lines, LLC, Providence & Worcester Railroad Company (P&W), and Transit America Services Inc./Alternate Concepts Inc. A Joint Venture.

9. In the event the performance of any Contract involves professional services, the Contractor or its applicable Subcontractors shall provide **Professional Liability Insurance** insuring against liability for professional services performed under this Contract in the amount of not less than Two Million Dollars (\$2,000,000) per occurrence, Two Million Dollars (\$2,000,000) aggregate. This policy shall remain in full force and effect from the date of any Contract through the longer of the expiration of the statute of limitations for actions against professional service providers (inclusive of extended injury limitation) or three (3) years from the date of completion of work by the Consultant or its subconsultant. It is understood that no terms and conditions of such insurance policy may be changed except upon the prior written approval of NHPA, which approval shall not be unreasonably withheld. This policy shall also include **pollution and environmental impairment coverage**, if such insurance is applicable to the services performed by the Consultant or subconsultant under any Contract, in the minimum amount of Two Million Dollars (\$2,000,000). The Consultant or subconsultant may provide pollution and environmental impairment coverage as stand-alone policy rather than as part of this Professional Liability Insurance policy.

10. **Policy Requirements:**

- a. All insurance coverages shall be primary.
 - b. All insurance policies shall be written by insurance company or companies satisfactory to the New Haven Parking Authority, as applicable, having a Financial Strength Rating of "A-" or higher and a Financial Size Rating of VIII or higher from A.M. Best Company.
 - c. Each insurance policy shall require that the insurance company agrees to investigate and defend the insured against all potential claims for damages, even if groundless.
 - d. All insurance policies shall also include a **Waiver of Subrogation**.
11. If any insurance policy is written on a "Claims Made" basis, the policy must be continually renewed for a minimum of two (2) years from the completion date of this Contract. If the policy is replaced and/or the retroactive date is changed, then the expiring policy must be endorsed to extend the reporting period for claims for the policy in effect during the contract for two (2) years from the completion date.

12. **Insurance Certificates:** The Contractor shall present original, completed Certificates of Insurance to the New Haven Parking Authority, 232 George Street, New Haven, CT 06510 prior to contract issuance. Contractor shall provide renewal certificates at least 30 days prior to the expiration date of the policies. Should any of the above-described policies be cancelled, limits reduced or coverage altered, 30 days written notice must be given to the New Haven Parking Authority.

C. Indemnification:

1. **For the purposes of this Paragraph 313.C, the following definitions shall apply:**

Indemnified Parties: The State of Connecticut, including CTDOT and any office, department, board, council, commission, institution or other agency or entity of the State of Connecticut, the City of New Haven, and the New Haven Parking Authority.

Claims: All actions, suits, claims, demands, investigations and proceedings of any kind, open, pending or threatened, whether mature, unmatured, contingent, known or unknown, at law or in equity, in any forum.

Contractor Parties: A Contractor's members, directors, officers, shareholders, partners, managers, principal officers, representatives, agents, servants, consultants, employees or any one of them or any other person or entity with whom the Contractor is in privity of oral or written contract and the Contractor intends for such other person or entity to Perform under the Contract in any capacity.

Records: All working papers and such other information and materials as may have been accumulated by the Contractor in performing under the Contract, including but not limited to, documents, data, plans, books, computations, drawings, specifications, notes, reports, records, estimates, summaries, memoranda and correspondence, kept or stored in any form.

2. **Contractor's Indemnification Obligation:**

The Contractor shall indemnify, defend and hold harmless the State, the City of New Haven, and the New Haven Parking Authority and each of their officers, representatives, agents, servants, employees, successors and assigns from and against any and all (1) Claims arising, directly or indirectly, in connection with the Contract, including the acts of commission or omission (collectively, the "Acts")

of the Contractor or Contractor Parties; and (2) liabilities, damages, losses, costs and expenses, including but not limited to, attorneys' and other professionals' fees, arising, directly or indirectly, in connection with Claims, Acts or the Contract. The Contractor shall use counsel reasonably acceptable to the Indemnified Parties in carrying out its obligations under this section. The Contractor's obligations under this section to indemnify, defend and hold harmless against Claims includes Claims concerning confidentiality of any part of or all of the Contractor's bid, proposal or any Records, any intellectual property rights, other proprietary rights of any person or entity, copyrighted or uncopyrighted compositions, secret processes, patented or unpatented inventions, articles or appliances furnished or used in the performance of this Contract.

The Contractor shall not be responsible for indemnifying or holding the State, the City of New Haven, and the New Haven Parking Authority harmless from any liability arising due to the negligence of the State, the City of New Haven, and the New Haven Parking Authority or any third party acting under the direct control or supervision of the Indemnified parties.

The Contractor shall reimburse the Indemnified Parties for any and all damages to the real or personal property of the Indemnified Parties caused by the Acts of the Contractor or any Contractor Parties. The Indemnified Parties shall give the Contractor reasonable notice of any such Claims.

The Contractor's duties under this section shall remain fully in effect and binding in accordance with the terms and conditions of the Contract, without being lessened or compromised in any way, even where the Contractor is alleged or is found to have merely contributed in part to the Acts giving rise to the Claims and/or where the State is alleged or is found to have contributed to the Acts giving rise to the Claims.

This section shall survive the Termination of the Contract and shall not be limited by reason of any insurance coverage.

314. REQUIREMENTS OF THE STATE OF CONNECTICUT

Pursuant to the February 14, 2022 Lease, Operating, and Funding Agreement between the State of Connecticut, Department of Transportation and the City of New Haven for New Haven Union Station Campus, the Successful Bidder as *Contractor* shall comply with certain provisions required as stated herein per enclosed Exhibit "A" regarding work affecting Union Station Campus.

315. ADDITIONAL REQUIREMENTS OF THE CAPITAL FUNDING AGREEMENT

In the event any work affecting Union Station Campus is funded through the State of Connecticut Department of Transportation (CTDOT) Capital Funding Agreement, there are certain special requirements with which the Contractor shall comply. Pursuant to the Capital Funding Agreement between the State of Connecticut, Department of Transportation and the City of New Haven for New Haven Union Station Campus, the Successful Bidder as *Contractor* shall comply with certain provisions required as stated herein per enclosed Exhibit “A-1” regarding work affecting Union Station Campus.

The following list amends Item 4.B.1, Project Administration Requirements, in Exhibit A-1, with regard to Form 819 Requirements:

Section 1.20 General Clauses for Facilities Construction, of CTDOT Form 818 applies. The following list amends Item 4.B.1, Project Administration Requirements, in Exhibit A-1, with regard to Form 819 Requirements:

1.20-1.01.01 Definitions, add statement: General references to Commissioner, Department, Manager of Contracts, Owner and Engineer and the like shall also mean NHPA and City as applicable in the conduct of the Project.

1.20-1.02.01. Contract bidding and award: Delete reference to this section. Follow the procedures included in the City/NHPA Project Manual.

1.20-1.02.03 Examination of contract, documents, and work site, add statement: References to *DOT contracts* shall also mean *NHPA and City* as applicable in the conduct of the Project.

1.20-1.03.07 Insurance: This section is not applicable. Follow Section 313 of the Special Conditions.

1.20-1.05.01 Authority of Engineer. add statement: The contractor shall also notify NHPA, City, and CTDOT of its claim against the Union Station Partnership with regard to work on the Project.

1.20-1.07.05 Load restrictions, add statement: “With regard to vehicle weights and storage of construction materials, the Contractor shall review the loads imposed by the vehicles or stored materials with the Engineer prior to activity within the parking garage or within the building.” Also, delete the third sentence in paragraph (b), Storage of Construction Materials/Equipment on Structures.

1.20-1.07.06 Sanitary provisions, add statement: In lieu of portable toilets, the Contractor may use the public restrooms provided that it does not create a nuisance.

1.20-1.07.07 Safety, and public convenience, add statement: Contractor shall provide a clear zone suitable for the design, speed and travel way geometry, subject to review and approval by the Engineer.

1.20-1.08.02 Construction field office, add statement: Contractor need not maintain a field office at the Project site. As a minimum, Contractor shall have an e-mail address where communications may be received as well as Contractor shall provide a mobile phone number at which Contractor can be reached at all times. Contractor's superintendent shall have in its use a smartphone with email access during the day to facilitate electronic communications. Existing vacant space as approved by Owner and in as-is condition may be utilized for a temporary construction field office. Contractor shall make all necessary improvements to utilize the space for its office use, and comply with all applicable laws.

1.20-1.09.06.A(1), Partial Payments: Monthly and Semi-monthly Estimates: Delete sentence: "Retainage will not be held." Substitute with sentence: "Retainage of 2% of the total work completed and stored will be held until the contractor has submitted an approved Affirmative Action Plan to CHRO, and CHRO has granted approval."

316. LABOR COMPLIANCE

1. Nondiscrimination: The Applicant will comply with Connecticut General Statutes § 4a-60, as may be amended, which prohibits the Applicant from discriminating or permitting discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, mental retardation, mental disability, or physical disability, including, but not limited to, blindness, unless it is shown by such contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut. The Applicant will comply with Connecticut General Statutes § 4a-60a, as may be amended, which prohibits the Applicant from discriminating or permitting discrimination against any person or group of persons on the grounds of sexual orientation.

2. Affirmative Action: The Applicant will comply with Connecticut General Statutes § 4a-60, which prohibits the Applicant from engaging in or permitting discrimination in the performance of the work involved as well as requires that the company take affirmative action to ensure that all job applicants with job related qualifications are employed and that employees are, when employed, treated in a nondiscriminatory manner.

3. Executive Order Number 3: The Applicant will comply with Executive Order Number Three, which gives the State Labor Commissioner continuing jurisdiction over Agreement performance in regard to nondiscrimination. It empowers the State Labor Commissioner to cancel, terminate or suspend the Assistance Agreement for violation of

or noncompliance with the order or any state or federal law concerning nondiscrimination.

4. Executive Order Number 16: The Applicant will comply with Executive Order Number Sixteen, of Governor John G. Rowland promulgated August 4, 1999, regarding Violence in the Workplace Prevention. The Assistance Agreement may be cancelled, terminated or suspended by the State for violation or noncompliance with said Executive Order No. Ver. 9.14.Mun Page 6 Sixteen.

5. Executive Order Number 17: The Applicant will comply with Executive Order Number Seventeen, which gives the State Labor Commissioner jurisdiction in respect to Agreement performance in regard to listing all employment openings with the Connecticut Employment Service.

317. CASH FLOW SCHEDULE

The Contractor shall submit a detailed Cash Flow Schedule, which shall be updated monthly, stating its anticipated invoices to NHPA. The Contractor shall submit monthly invoices for payment based upon the work completed and approved but not to exceed the amount set forth in such Cash Flow Schedule as periodically updated.

The first Cash Flow Schedule shall be submitted within ten (10) days of the Notice of Award. Failure of the Contractor to properly project cash flow needs may result in a delay of payment to the Contractor. No interest expenses will be paid to the Contractor for any reason. The Contractor shall be responsible for any ineligible costs.

318. REQUIREMENTS OF PROGRAM MANAGER

New Haven Parking Authority (“Owner”) has engaged Turner Construction Company (or any successor) as its current professional construction program manager (“Program Manager”). The Contractor, identified by Turner as “Trade Contractor”, shall agree to the terms of the “Trade Contract Attachment”, copy of form enclosed in the Bid Documents and restated below:

The Trade Contractor acknowledges and agrees (i) that the role of the Program Manager is to function solely on behalf of and for the benefit of the Owner, (ii) that the Trade Contractor waives all claims, whether in contract, tort or otherwise, that it may now or hereafter have against the Program Manager, (iii) that the Program Manager shall be an additional insured on the insurance policies of the Trade Contractor and that all such policies shall contain a waiver of subrogation in favor of the Program Manager and (iv) that the Trade Contractor shall defend, indemnify and hold harmless Owner and Program Manager from any and all claims, demands, and suits (including, but not limited to suits for bodily injury and property damage) in any way arising out of or related to their

respective contracts or alleged failure of Trade Contractor to perform its responsibilities or obligations.

The Trade Contractor further acknowledges that it must, at its own expense; work cooperatively with all other Trade Contractors on site to coordinate its work with the work of such Trade Contractors, including modifying its schedule and activities. To further such coordination it must, when requested by the Program Manager, submit to the Program Manager, a current updated copy of its detailed schedule to demonstrate the status of such coordination and, if the Program Manager deems it necessary, to modify its schedules and operations as and in the manner required by the Program Manager and to execute its work in the manner shown on the revised schedule. It is agreed that any such modifications required by the Program Manager or any resulting work shall not result in any claims against the Program Manager or the Owner and all such claims are waived. While the Program Manager may have the right to take such action, in no respect shall the Owner or the Program Manager be obligated to do so.

319. COST-PLUS EXTRA WORK BY SUBCONTRACTORS

Add the following paragraph as applicable to General Conditions Section 139.c.2:

(e) All extra work performed by a subcontractor will be according to the above requirements as if the work were performed directly by the Contractor. Extra work performed by a subcontractor will be paid as actual cost plus fifteen percent (15%) to the subcontractor and five percent (5%) to the General Contractor. If there are second and third-tier subcontractors, the aggregate mark-up for all subcontractors involved shall be fifteen percent (15%). The maximum mark-up for all subcontractors plus General Contractor is twenty percent (20%).

For work at the Union Station Campus, add the following sentence as applicable to General Conditions Sections 139 and 140 which supersedes:

Refer to applicable provisions in CTDOT Form 819, including but not limited to, Sections 1.20.1.04.05 and 1.20.1.09.04.

320. GUARANTEES

Work guaranteed for a period greater than one year, as described in the General Conditions, shall have a written guarantee. The guarantee will be as described in the related specification section governing that work or elsewhere in the specification. The guarantee shall be submitted prior to final payment for the project. Unless otherwise noted all work shall be guaranteed free from defects in material and workmanship for a minimum period of **two years from the date of final completion.**

321. PROTECTION/SAFETY MEASURES

- A. Caution shall be exercised by the Contractor at all times for the protection of persons and property and all safety regulations and other provisions of applicable Federal, State and local laws, Building and Construction codes, including the requirements of the Occupational Safety and Health Administration shall be observed.
- B. The drawings do not include standards or guidelines for construction safety. The Contractor shall be responsible for the adequacy and safety of all construction methods and the safe prosecution of the Work, including but not limited to forms, false-work, scaffolding, protective barricades, and protective rails. It is expressly stipulated that any examination and/or approval by the Engineer of the Contractor's plans for such items as well as for any other items needed for the prosecution of the work will cover only general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Contractor shall assume full and complete responsibility for safe prosecution of the Work at all times and for obtaining satisfactory results.
- C. During the course of the performance of the Work under the Contract, if any operation, practice, or condition is deemed by the Engineer to be unsafe, the Contractor, when notified verbally and later confirmed in writing by the Engineer, shall take such corrective action immediately as appropriate.
- D. Nothing in the contract documents shall be construed as relieving the Contractor from full responsibility of safe prosecution of the Work at all times. In the event the Owner, the Engineer or its representative are held by court of administrative body to be liable for personal injuries or damages to property arising from deficiencies in the job-site safety, the Contractor shall promptly indemnify and hold them harmless.
- E. All appropriate safety measures need to be taken during construction due to the continuous operation of the Facilities.
- F. The delivery and setup of any scaffolding and cranes will be coordinated in advance with the Owner, Architect/Engineer, and Authorities Having Jurisdiction as not to interfere or endanger any persons or property inside or outside of building. Scaffolding and cranes will be setup and operated by qualified personnel only. All personnel using scaffolding, cranes and ladders will do so by OSHA standards.
- G. Demolished material is to be contained and secured at the damaged area and brought to ground level as soon as possible to avoid debris falling on pedestrians below.
- H. Install tarps/nets below work area on scaffolding/cranes/ladder to catch any falling debris.

- I. Dust and dirt resulting from demolition and removal shall be controlled by erecting dust-proof partitions or barriers and hanging dust cloths to contain/collect the dust and debris from the construction activities. The Contractor is responsible for preventing the spread of construction dirt and debris into all areas of operation in and outside of the building. Contractor will wet the debris and other materials or use other approved methods to prevent the spread of dust to occupied portions of the building and site. Use of water will not be permitted when it will result in a hazardous condition such as slippery floors, flooding, or pollution.
- J. Any dust/debris generated by construction shall require that the area to be partitioned off and an air-filtering device installed inside partition to absorb all dust and debris created from the work operation. Cover any adjacent existing HVAC return grills and smoke detectors prior to generating dust or debris or using volatile cleaning/finishing products. Coordinate with NHPA and applicable Authorities Having Jurisdiction.
- K. Any debris/dust that collects on ground level that poses a tripping-slipping hazard shall be removed immediately.
- L. Contain all dust and debris at the level/immediate location that it is being generated at. Store in a suitable container with a cover so that if it is dropped the contents won't spill out if knocked over. Secure container to crane, scaffolding or as otherwise applicable.
- M. Entrances to building, tenant spaces, public areas as well as all walkways, pathways, travel-ways etc. will be kept clear and have adequate overhead protection from falling debris. If an entrance or travel-way has to be closed, the contractor will provide barriers and signage directing people to next entrance or alternate travel-way.
- N. The Contractor shall at all times provide protection against the weather so as to maintain their work, materials, apparatus and fixtures free from injury or damage. At the end of the days work all new work likely to be damaged shall be covered.
- O. Any work damaged by failure to provide above protection shall be removed and replaced with new work at the Contractor's expense.
- P. The Contractor shall pay the cost of repair or replacement from theft or damage to existing equipment, material or work due to negligence by the Contractor in securing the project site and adjacent areas affected by the Contractor's operations.

322. CALL BEFORE-YOU-DIG

The Contractor's attention is called to the fact that they are obligated, by State Law, to notify the Public Utilities Control Authority (1-800-922-4455) 48 hours prior to beginning any digging or discharging of explosives. This "One Call Before You Dig"

system will assure that each utility company will have marked its lines in the field before any digging activity commences. The Contractor assumes all responsibilities for any damage to the various utility services, and all liabilities arising therefrom.

The Contractor shall make the necessary arrangements with the respective Utility Companies and provide grades for resetting and adjusting of private utility company manholes and grade boxes, and the relocation of poles and hydrants; all at no additional costs to NHPA or the City. Any delays, which are caused by conflicts with utility lines, shall not be considered as a basis of extending the time for completion.

323. LAWS

All work will be in conformance with any and all applicable laws of the Federal Government, State of Connecticut, and City of New Haven relating to the Contract and are hereby included by reference.

324. REPORTS, RECORDS AND DATA

The contractor and each of its subcontractors shall submit to NHPA, schedules of quantities and costs, progress schedules, payroll reports, estimates, records and other data as NHPA may request concerning the work performed or to be performed under this contract.

325. TRAFFIC AND CONSTRUCTION

With reference to the street and sidewalk work, the Contractor shall maintain and protect traffic in accordance with the following additional requirements:

1. Where referred to herein, "Authorized Work Hours" are as approved by public agencies having jurisdiction.
2. At no time shall work occur on any portion of this project without prior written approval from City and/or State as applicable for work outside Authorized Work Hours.
3. All trenches must be either backfilled or covered with steel plate, all public rights-of-way clean of debris, material, equipment, supplies, etc. and all streets must be fully open to traffic as permitted at no additional cost to NHPA, City or State. It is the Contractor's responsibility to notify NHPA and Authorities Having Jurisdiction immediately, should conditions require the delay of opening any street after permitted times.

4. No detouring of traffic is allowed on City or State roadways, sidewalks and rights-of-way; however, detours of traffic within the off-street project site may be permitted with the prior written consent of NHPA and Authorities Having Jurisdiction.
5. The Contractor shall maintain access to all driveways except as approved in writing as part of Contractor's traffic control plan.
6. No plates shall be used during winter because of interference with snow plowing.
7. The Contractor shall provide and install all new pavement markings damaged or removed during construction, and as shown on the drawings.
8. Prior to the commencement of any activity which could interfere in or impede the normal movement of traffic, the Contractor shall notify NHPA and Authorities Having Jurisdiction and request an extra-duty police officer to act as a trafficman.
9. No street or sidewalk shall be obstructed to traffic at any time, unless specifically approved by NHPA and Authorities Having Jurisdiction.
10. All costs for traffic maintenance and protection, including labor, equipment, and services involved in the erection, maintenance, moving, adjusting, relocating, and storing of all traffic control devices such as signs, barricades, cones, drums, and markings shall be included in the total contract price as part of applicable line items and no separate payments for this work will be made.

326. CITY STREET SIGNS

Any signs disturbed or removed by the Contractor, whether shown on the plans or not, shall be reset or replaced at the Contractor's expense as directed by the Engineer or by NHPA having jurisdiction. Any traffic control devices damaged due to negligence shall be replaced by the Contractor at its expense.

327. OTHER CONSTRUCTION AND CONTRACTORS

The Contractor's attention is called to the following:

Utility Companies' crews may be working at the project site from time to time. It shall be the Contractor's responsibility to coordinate and schedule its operations so as not to cause any conflicts between themselves and the various utilities. All costs incurred in coordinating and scheduling the various operations shall be included in the Total Bid Price and no separate payments for this work will be allowed. NHPA may also have additional contractors working on site besides the ones identified in Special Conditions 307.

328. WATER POLLUTION ABATEMENT

Under no circumstances shall the Contractor allow sanitary sewage to be discharged into any storm sewer, river, brook, stream, creek, storm ditch, or the New Haven Harbor. In case of the failure of any component of the sewer system, the Contractor shall take immediate action to ensure that sanitary sewage does not discharge into any storm sewer, river, brook, stream, creek, storm ditch, or the New Haven Harbor. These immediate actions shall include whatever labor (including overtime), materials, and equipment as may be required and all work shall be done at no cost to NHPA or Authorities Having Jurisdiction. If no prompt action is taken, NHPA and Authorities Having Jurisdiction may proceed with corrective work and deduct whatever costs are incurred from future payments to the Contractor.

329. EXISTING SEWERS AND CULVERTS (STORM AND SANITARY)

The Contractor shall be responsible for maintaining and protecting all existing sewers and culverts encountered in the work under this contract. Hand excavation and adequate bracing and shoring shall be employed where required to ensure the structural integrity of said existing structures.

The Contractor shall save the City of New Haven, the Greater New Haven Water Pollution Control Authority, the State of Connecticut and the NHPA harmless and shall be solely responsible for any liabilities or damages arising from its work near, under or through existing sewers and culverts. The Contractor shall repair and replace, as required by the Engineer, any existing sewers or culverts damaged as a result of his work.

There will be no separate payment by NHPA for work covered in this section.

The Contractor shall schedule its operations so as to insure and maintain the uninterrupted flow in existing sewers at all times.

All frames, grates, covers and catch basin heads that are to be removed because of abandonment of existing manholes or catch basins or for other reasons shall be handled carefully so that they may be reused. The Engineer shall direct where they are to be delivered and stored neatly at various sites within the City, at no additional cost to NHPA.

330. DUST CONTROL

The Contractor shall be responsible for controlling dust from its operations, and when ordered by the Engineer shall use whatever methods necessary for dust control, in a manner satisfactory to the Engineer. No separate payment for this work will be made, and all costs including labor, materials, and equipment shall be considered to be included in the total contract price as part of applicable line items.

331. DAILY CLEAN - UP

The Contractor shall at the end of each workday, keep the project area clean, and free from debris, excavation materials, or any other items considered as trash. These items shall be disposed of daily in a legal manner at an approved dump site. No separate payment shall be made for any work involved in this section.

332. EXISTING CONDITIONS

The site conditions are as of the day the Contractor begins work. All work to be performed will be based on the conditions found at that time. It is the obligation of the Contractor to inform NHPA of any substantial changes in the site conditions that have occurred between the time the bid is opened and the notice to begin work. Any substantial change in the site during this period will be evaluated as to its impact on the contract cost and its impact on the notice to proceed. A substantial change may require re-bidding the entire project. This will be at the sole discretion of NHPA and the Contractor awarded the project will have no adverse claim against NHPA if such a determination has been made. No claims or extras will be allowed for any changes in site conditions due to the Contractor's discovery after the commencement of work, unless there is an approved change order.

NHPA assumes that the Contractor, during the process of developing its bid, has thoroughly examined the site or project area and has disclosed any obvious defects in the plans and specifications prior to bid and has entered into this agreement to complete all work required in the contract at the bid price submitted and accepted.

333. RIGHT TO ELIMINATE WORK

NHPA reserves the right to eliminate or remove from the Contract any of the items or portions of such items of work set forth on the Bid Form, including but not limited to the quantities to be provided or scope of the work, in the event it deems it to be in the best interest of NHPA. NHPA also has the right to terminate the Agreement with the Contractor for cause or convenience (reference General Conditions Section 145).

334. DESCRIPTION OF WORK

All materials furnished and used in the completed work shall be new, of the best quality, and recognized as standard in construction practices. Whenever a specification number of reference is given, the subsequent amendments (if any) shall be included. The standards set forth in the selection of materials and supplies are intended to conform with those

standards adopted by Owner. Preference in manufacture shall be given to adopted standards, and the Contractor shall further familiarize themselves with the requirements of the Owner when the occasion or choice of materials or supplies so demands.

335. METHODS OF CONSTRUCTION

No materials shall be used which are known or found to be defective in any way. Notice shall be given to the Owner of any defective or imperfect material. Defective or unfit material, found to have been used, shall be removed and replaced by the Contractor with sound and unobjectionable material without additional expense to the Owner. All materials furnished by the Contractor are subject to thorough inspections and tests by the Owner. The Contractor shall submit samples as required by the Owner, of the various materials used on the contract for testing purposes. All ordering lists shall be submitted for approval to the Owner by the Contractor. Materials shall not be ordered until the ordering lists have been approved.

336. REMOVAL AND SALVAGE OF MATERIAL

Items shown on the drawings as existing to be removed for reuse/reinstallation, shall be stored and protected by the Contractor until they are re-installed or delivered to the storage yards.

The existing items that will be removed from the Project Site are the property of the NHPA and/or the City or State and shall be salvaged from the Site unless otherwise directed by NHPA and/or the City or State as applicable. NHPA, the City and State each retain the right of first refusal for all salvaged items owned by them. All salvaged items that will not be re-installed at the Site must be delivered and stored to the New Haven Parking Authority at a designated location as directed by the New Haven Parking Authority, if NHPA elects to retain or legally disposed of by the Contractor; or at a designated location within the City for City-owned materials or at a designated location within the State for State-owned materials. Items to be re-installed are identified on Drawings, or as directed by the NHPA through the Engineer.

Once these items are removed, the Contractor must protect them from theft, damage, or vandalism prior to delivery. If NHPA, the City or State does not want a portion of the surplus or salvage material, that portion shall become the property of the Contractor to be disposed of by him after having been so directed in writing by NHPA.

There shall be no separate payment to the Contractor for all this work, but the cost shall be considered as included in the Total Contract Price as part of applicable line items.

337. TESTS AND CERTIFICATION OF MATERIALS

At the discretion of the Engineer, periodic tests may be taken to satisfy the quality of the work or materials to be used on the project. The responsibility of payment for such tests will be NHPA's unless the quality of the Contractor's work or materials does not meet the specifications or as otherwise stated in the Technical Specifications. In such cases, the Contractor will pay for all unsatisfactory tests taken.

Upon request of the Engineer, the Contractor shall, at its expense, provide certifications of materials used on the project. If the Contractor chooses to do tests to prove a substitute item would be acceptable to NHPA, the Contractor shall be responsible for all costs involved to satisfy NHPA of the acceptability of the material.

338. PROJECT PHOTOGRAPHS

The contractor shall furnish NHPA with color photographs showing the initial existing conditions of the areas to be disturbed by construction and progress photographs to be taken during the course of construction showing the progression of the work and/or at times and locations which may be designated by the Owner/Engineer. The Contractor shall provide electronic files (JPEG) of all photographs or similar format if approved by Owner/Engineer. Electronic files shall be formatted for later printing (by the Owner/Engineer, at their discretion) and shall be 5 megapixels minimum.

Electronic files of all submitted photographs shall be provided with suitable file names showing project number, facility name, photo number (in sequence), date taken, vantage point, and description of work that the photograph is representing. Alternatively, the Contractor may prepare a spreadsheet listing this information to coincide with the photograph number for matching.

Upon start of construction and every work week thereafter (until the work is substantially complete), the Contractor shall take photos of the construction. Submission of the photographs shall coincide with submission of Contractor's payment requisition or once per month as a minimum.

Contractor shall take representative photographs of the work in progress, at critical milestones of the work, and at the various stages of multi-stage work. When photographing the various stages of multi-stage work, the Contractor shall endeavor to duplicate the vantage point of the photographs so that the photographs can be properly compared and the full process of the multi-stage work can be reviewed.

Contractor shall take photos in sufficient quantity to represent the work in progress, at critical milestones of the work, and at the various stages of multi-stage work. Contractor is responsible for providing the sufficient quality and quantity of the photographs. Contractor shall note that should the photographs be of poor-quality or be of insufficient

quantity, as solely determined by the Owner/Engineer, the photographs may be rejected and new photographs shall be submitted. NHPA reserves the right to seek additional information / photographs in addition to what is provided.

All costs of furnishing these photographs shall be included in the Contract Price. No separate payment will be made.

END OF SPECIAL CONDITIONS

**DRAFT AGREEMENT
BY AND BETWEEN
NEW HAVEN PARKING AUTHORITY
AND
[REDACTED] COMPANY
REGARDING PARKING ACCESS AND REVENUE CONTROL SYSTEM
REPLACEMENT
AT
NEW HAVEN PARKING AUTHORITY FACILITIES
NEW HAVEN, CONNECTICUT
NHPA PROJECT #24-029**

PART I

This Agreement, consisting of Parts I and II, entered into effective this [REDACTED] day of [REDACTED], 2025 by and between the New Haven Parking Authority (hereinafter referred to as "NHPA"), a special purpose municipal authority created by Special Act 51-473 of the General Assembly of the State of Connecticut, as amended, with offices at 232 George Street, New Haven, CT 06510, and [REDACTED] having offices at [REDACTED] (hereinafter referred to as "CONTRACTOR").

WITNESSETH THAT:

WHEREAS, NHPA requires the installation, configuration, and ongoing maintenance of a new Parking Access and Revenue Control System ("PARCS") to replace its existing infrastructure and software, including the modernization and replacement of parking booths, design and install integratable security cameras and door control system for all Garage pedestrian entrances; and

WHEREAS, as a result of Request for Proposals, CONTRACTOR has been selected as the successful proposer offering the services in the best interest of NHPA; and

WHEREAS, CONTRACTOR has agreed to perform the services set forth hereunder;

NOW, THEREFORE, AND IN CONSIDERATION OF THE FOREGOING, NHPA and CONTRACTOR hereby agree as follows:

SECTION 1: ENGAGEMENT OF CONTRACTOR

101. NHPA hereby engages CONTRACTOR, and CONTRACTOR hereby agrees to perform the Services in accordance with the terms and conditions and for the consideration set forth herein. With regard to services at the Union Station Campus (Union Station Building, Union Station Garage, and State Street Station), all references to the Station Manager, Parking Manager and/or Brokerage Manager contained in this Agreement or as referenced relate to the New Haven Parking Authority solely in its capacity as the duly authorized Station Manager, Parking

Manager and Brokerage Manager of the Union Station Campus pursuant to its Management Agreement with the City of New Haven (the "Management Agreement") and its responsibilities as the Station Manager, Parking Manager and/or Brokerage Manager pursuant to the 2022 New Haven Union Station Lease, Operating and Funding Agreement between the State of Connecticut and the City of New Haven ("LOFA"). No reference to the Station Manager, Parking Manager and/or Brokerage Manager herein contained shall be construed as creating any liability of the Station Manager, Parking Manager and/or Brokerage Manager for any obligation in any capacity other than as the duly authorized Station Manager, Parking Manager and/or Brokerage Manager of the Premises pursuant to the LOFA and Management Agreement.

102. The person in charge of administering this Agreement on behalf of NHPA shall be _____ or such other person as NHPA shall designate in writing.

103. The person responsible for the Services to be rendered on behalf of CONTRACTOR shall be _____, _____, or such other qualified person as is designated in writing by CONTRACTOR and accepted by NHPA.

104. The CONTRACTOR shall have and maintain all applicable and necessary licenses, certifications, permits, and/or similar approvals. Upon request, such documentation shall be made available to NHPA, and others as required by law.

105. The CONTRACTOR shall not subcontract any services to be performed under this Agreement without the prior written approval of NHPA. Any subcontractor shall have and maintain applicable and necessary licenses, permits, and/or similar approvals and shall be made available upon request by NHPA, and others as required by law. The firm of _____ is hereby approved as the _____ subcontractor. The firm of _____ is hereby approved as the _____ subcontractor.

106. Independent Contractor: It is the express intention of the parties that CONTRACTOR and/or its Subcontractors shall be at all times an *independent contractor*, and not an employee of NHPA. CONTRACTOR retains the right to provide services for others during the term of this Agreement and is not required to devote CONTRACTOR's services exclusively to NHPA. CONTRACTOR will propose CONTRACTOR's own hours of work and will, in consultation with NHPA, determine the appropriate means and methods of carrying out the work and project. NHPA shall not provide CONTRACTOR with any employee benefits, and all payments to CONTRACTOR for services and work hereunder will be reported to appropriate taxing authorities via a Form 1099 or equivalent.

SECTION 2: SCOPE OF SERVICES

201. CONTRACTOR shall perform the services set forth under this Agreement in a satisfactory manner, as reasonably determined by NHPA. CONTRACTOR shall make such revisions or modifications to its work, at its own cost and expense, as may be required by NHPA.

202. The Services to be performed by the CONTRACTOR shall include the following with respect to the Project, as further described in Section 210 hereof: _____

203. The services to be performed by CONTRACTOR with respect to the installation, configuration, and ongoing maintenance of a new PARCS to replace its existing infrastructure and software, including the modernization and replacement of parking booths, shall include but not be limited to those as set forth in Exhibit “**J**”, which is attached hereto and made a part hereof. The facilities that will be receiving the new PARCS are Air Rights Garage, Crown Street Garage, Granite Square Garage, Temple Medical Garage, Temple Street Garage, Union Station Garage, 270 State Street Garage, Elm/Orange Lot, State/Wall Lot, State/Chapel Lot, State/Fair Lot, State/Trumbull Lot, State/Pulaski Lot, Whalley/Blake Lot, and the Under Air Rights surface parking lot. The parking facilities at Air Rights Garage, Crown Street Garage, Temple Medical Garage, Temple Street Garage, Union Station Garage, and Granite Square Garage will undergo booth(s) modernization, while Under Air Rights surface parking lot will have its booth replaced entirely.

204. Unless otherwise specified in this Agreement, CONTRACTOR shall submit all written materials required to be submitted under this Agreement in electronic and paper format as well as printed copies upon request.

205. In performing the Services, CONTRACTOR shall consult with NHPA and shall meet, as appropriate, with NHPA and with other persons or entities, including Federal, State, and local officials and the like, as deemed necessary at the discretion of NHPA.

206. In performing the services required under this Agreement, any designs or other materials submitted by CONTRACTOR shall conform to the applicable provisions of Federal, State, and local laws and regulations including, but not limited to, the requirements of the Basic Building Code of the State of Connecticut, applicable zoning regulations, fire safety regulations, Americans with Disabilities Act, and any other applicable laws. ADA, etc.

207. CONTRACTOR shall provide all plans and materials, as applicable, to NHPA at least 10 days prior to the commencement of work. It is understood that NHPA will review all plans and materials submitted by CONTRACTOR as part of the Services, and CONTRACTOR shall revise, at its sole expense, all submitted plans or other materials which do not conform to applicable laws and regulations in effect during performance of the Services. CONTRACTOR shall indemnify NHPA for any costs or damages arising directly or indirectly from plans or other materials which contain errors or omissions, or which do not conform to applicable laws and regulations, irrespective of whether NHPA has approved such plans or materials.

208. Insurance and Indemnity Requirements:

- A. The following shall be listed as additional insureds to all policies on a primary and non-contributory basis for insurance coverages required as set forth below, to the extent allowed by law: the New Haven Parking Authority/Park New Haven, the City of New Haven, and the State of Connecticut, and their respective officers, representatives, agents, servants, employees, successors and assigns. NHPA reserves the right to add entities to this list.
- B. With respect to the operations performed by the Contractor and those performed for the Contractor by its subcontractors, the Contractor shall carry, and/or require its

subcontractors to carry, for the duration of the Contract, with the required additional insureds, the minimum liability insurance coverage set forth in the following items “B(1)” through “B(8)” at the Contractor’s expense:

1. **Worker’s Compensation and Employers’ Liability Insurance** as required by the laws of the State of Connecticut: Workers Compensation with Statutory Limits and Employers’ Liability with policy limit amounts not less than:
 - a. \$1,000,000 Each Accident (bodily injury by accident);
 - b. \$1,000,000 Disease – Policy limit (bodily injury by disease); and
 - c. \$1,000,000 Disease – Each Employee (bodily injury by disease).

When work is to be performed over or adjacent to navigable water, each Workers’ Compensation policy shall contain the U.S. Longshoreman’s and Harbor Workers’ Act endorsement with the limits in accordance with the laws of the United States.

2. **Builder’s Risk Insurance:** In the event the performance of any Contract involves **construction or demolition work** performed by Contractor or its subcontractor(s), provide coverage in an amount equal to or greater than the dollar value of the construction contract. The New Haven Parking Authority shall be named as Loss Payee. The City of New Haven and the State of Connecticut shall be listed as additional insureds.
3. **Owners’ Protective Liability Insurance:** In the event the performance of any Contract involves **construction or demolition work** performed by Contractor or its subcontractor(s), provide coverage for the benefit and in the name of each of the New Haven Parking Authority, the City of New Haven, and the State of Connecticut, with policy limit amounts of not less than One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) aggregate.
4. **Commercial General Liability Insurance, including Contractual Liability Insurance,** for all damages arising out of bodily injuries to, or death of, all persons and/or out of injury to, or destruction of, property, with policy limit amounts not less than the following One Million Dollars (\$1,000,000) each occurrence, and, subject to that limit per accident, a total (or aggregate) limit of Two Million Dollars (\$2,000,000).
5. **Automobile Liability Insurance** covering the operation of all motor vehicles, including those hired or borrowed, that are used in connection with the Project for all damages arising out of bodily injuries to, or death of, all persons and/or out of injury to, or destruction of, property, providing a One Million Dollars (\$1,000,000) combined single limit.
6. **Umbrella/Excess Liability** with limits of One Million Dollars (\$1,000,000) Each Occurrence and Aggregate. The Umbrella/Excess must apply over the Products & Completed Operations. This Item B(6) shall be in addition to any umbrella/excess liability insurance that the Contractor may secure to satisfy the minimum limits

required for Item B(4) Commercial General Liability and Item B(5) Automobile Liability Insurance using Umbrella Liability Insurance.

7. In the event the performance of any Contract involves **environmentally regulated substances or hazardous material exposure(s)**, Contractor's **Pollution Liability Insurance** with respect to the work and activities of the Contractor and/or their subcontractors, including but not limited to handling, transporting or disposing of any hazardous substances and/or environmentally regulated materials and any sudden and/or non-sudden pollution or impairment of the environment, including clean-up costs and defense with limits of liability specifically written for such Contract in the amount of at least Five Million Dollars (\$5,000,000). The Contractor and/or their subcontractors shall comply with all federal, state, and/or local laws, rules and regulations and shall obtain any additional coverage required by federal, state, or local government agencies. The Contractor's Pollution Liability Insurance shall be in effect from the date of written notice to proceed authorizing the work relating to the hazardous substances or other environmentally regulated materials and extend through the completion of the work.
8. In the event the performance of any Contract involves **construction or demolition work** performed by Contractor or its subcontractor(s) within fifty (50) feet of the railroad right-of-way or State-owned rail property, with applicability determined by the State of Connecticut Department of Transportation, **Railroad Protective Liability Insurance** providing coverage of at least Two Million Dollars (\$2,000,000) for each accident or occurrence resulting in damages from (1) bodily injury to or death of all persons and/or (2) injury to or destruction of property and subject to that limit per accident or occurrence, an aggregate coverage of at least Six Million Dollars (\$6,000,000) for all damages during the policy period, and with all entities falling within any of the following listed categories named as insured parties: (i) the owner of the railroad right-of-way, including the State of Connecticut, (ii) the owner of any railcar licensed or permitted to travel within that affected portion of railroad right-of-way, (iii) the operator of any railcar licensed or permitted to travel within that affected portion of the railroad right-of-way, and (iv) any other party with an insurable interest. If such insurance is required by the State of Connecticut Department of Transportation, the Contractor shall obtain (or require its subcontractor to obtain, as applicable) such insurance and submit evidence of the minimum coverage indicated above to the NHPA and the City prior to the commencement of the rail-related work and/or activities. The Contractor or its subcontractor, as applicable, shall maintain such coverage until the work and/or activities is/are accepted. The following railroads have insurable interests including Metro-North Commuter Railroad Company, Metropolitan Transportation Authority (MTA), National Railroad Passenger Corporation (AMTRAK), CSX Transportation, Inc. & New York Central Lines, LLC, Providence & Worcester Railroad Company (P&W), and Transit America Services Inc./Alternate Concepts Inc. A Joint Venture.

9. In the event the performance of any Contract involves professional services, the Contractor or its applicable Subcontractors shall provide **Professional Liability Insurance** insuring against liability for professional services performed under this Contract in the amount of not less than Two Million Dollars (\$2,000,000) per occurrence, Two Million Dollars (\$2,000,000) aggregate. This policy shall remain in full force and effect from the date of any Contract through the longer of the expiration of the statute of limitations for actions against professional service providers (inclusive of extended injury limitation) or three (3) years from the date of completion of work by the Consultant or its subconsultant. It is understood that no terms and conditions of such insurance policy may be changed except upon the prior written approval of NHPA, which approval shall not be unreasonably withheld. This policy shall also include **pollution and environmental impairment coverage**, if such insurance is applicable to the services performed by the Consultant or subconsultant under any Contract, in the minimum amount of Two Million Dollars (\$2,000,000). The Consultant or subconsultant may provide pollution and environmental impairment coverage as stand-alone policy rather than as part of this Professional Liability Insurance policy.

10. **Policy Requirements:**

- a. All insurance coverages shall be primary.
 - b. All insurance policies shall be written by insurance company or companies satisfactory to the New Haven Parking Authority, as applicable, having a Financial Strength Rating of "A-" or higher and a Financial Size Rating of VIII or higher from A.M. Best Company.
 - c. Each insurance policy shall require that the insurance company agrees to investigate and defend the insured against all potential claims for damages, even if groundless.
 - d. All insurance policies shall also include a **Waiver of Subrogation**.
11. If any insurance policy is written on a "Claims Made" basis, the policy must be continually renewed for a minimum of two (2) years from the completion date of this Contract. If the policy is replaced and/or the retroactive date is changed, then the expiring policy must be endorsed to extend the reporting period for claims for the policy in effect during the contract for two (2) years from the completion date.
12. **Insurance Certificates:** The Contractor shall present original, completed Certificates of Insurance to the New Haven Parking Authority, 232 George Street, New Haven, CT 06510 prior to contract issuance. Contractor shall provide renewal certificates at least 30 days prior to the expiration date of the policies. Should any of the above-described policies be cancelled, limits reduced or coverage altered, 30 days written notice must be given to the New Haven Parking Authority.

C. **Indemnification:**

1. **For the purposes of this Paragraph 208.C, the following definitions shall apply:**

Indemnified Parties: The State of Connecticut, including CTDOT and any office, department, board, council, commission, institution or other agency or entity of the State of Connecticut, the City of New Haven, and the New Haven Parking Authority.

Claims: All actions, suits, claims, demands, investigations and proceedings of any kind, open, pending or threatened, whether mature, unmatured, contingent, known or unknown, at law or in equity, in any forum.

Contractor Parties: A Contractor's members, directors, officers, shareholders, partners, managers, principal officers, representatives, agents, servants, consultants, employees or any one of them or any other person or entity with whom the Contractor is in privity of oral or written contract and the Contractor intends for such other person or entity to Perform under the Contract in any capacity.

Records: All working papers and such other information and materials as may have been accumulated by the Contractor in performing under the Contract, including but not limited to, documents, data, plans, books, computations, drawings, specifications, notes, reports, records, estimates, summaries, memoranda and correspondence, kept or stored in any form.

2. Contractor's Indemnification Obligation:

The Contractor shall indemnify, defend and hold harmless the State, the City of New Haven, and the New Haven Parking Authority and each of their officers, representatives, agents, servants, employees, successors and assigns from and against any and all (1) Claims arising, directly or indirectly, in connection with the Contract, including the acts of commission or omission (collectively, the "Acts") of the Contractor or Contractor Parties; and (2) liabilities, damages, losses, costs and expenses, including but not limited to, attorneys' and other professionals' fees, arising, directly or indirectly, in connection with Claims, Acts or the Contract. The Contractor shall use counsel reasonably acceptable to the Indemnified Parties in carrying out its obligations under this section. The Contractor's obligations under this section to indemnify, defend and hold harmless against Claims includes Claims concerning confidentiality of any part of or all of the Contractor's bid, proposal or any Records, any intellectual property rights, other proprietary rights of any person or entity, copyrighted or uncopyrighted compositions, secret processes, patented or unpatented inventions, articles or appliances furnished or used in the performance of this Contract.

The Contractor shall not be responsible for indemnifying or holding the State, the City of New Haven, and the New Haven Parking Authority harmless from any liability arising due to the negligence of the State, the City of New Haven, and the New Haven Parking Authority or any third party acting under the direct control or supervision of the Indemnified parties.

The Contractor shall reimburse the Indemnified Parties for any and all damages to the real or personal property of the Indemnified Parties caused by the Acts of the Contractor or any Contractor Parties. The Indemnified Parties shall give the Contractor reasonable notice of any such Claims.

The Contractor's duties under this section shall remain fully in effect and binding in accordance with the terms and conditions of the Contract, without being lessened or compromised in any way, even where the Contractor is alleged or is found to have merely contributed in part to the Acts giving rise to the Claims and/or where the State is alleged or is found to have contributed to the Acts giving rise to the Claims.

This section shall survive the Termination of the Contract and shall not be limited by reason of any insurance coverage.

209. All of the materials prepared by CONTRACTOR under this Agreement shall be the sole and exclusive property of NHPA, and CONTRACTOR shall label all drawings and documents accordingly. NHPA shall use materials prepared by CONTRACTOR under this Agreement solely for the purpose of this Project contemplated herein.

210. The Basic Services to be provided by CONTRACTOR shall consist of the Scope of Services as attached hereto as Exhibit " [REDACTED]".

SECTION 3: INFORMATION AND ITEMS TO BE FURNISHED TO THE CONTRACTOR

301. NHPA will provide CONTRACTOR with all documents, data, and other materials in its possession appropriate to the services to be performed hereunder, and will use its best efforts to secure materials or information from other sources requested by CONTRACTOR for the purpose of CONTRACTOR carrying out services under this agreement; Provided, However, that CONTRACTOR shall be responsible for verifying all information provided by NHPA.

SECTION 4: TIME OF PERFORMANCE

401. The Term of this Agreement shall commence effective as of [REDACTED], 2025 and shall expire on June 30, [REDACTED]. The "First Year" of the Term shall be for a period of [REDACTED] months commencing on [REDACTED], 2025 and continuing through June 30, [REDACTED], and the Compensation for the months in excess of 12 months shall be appropriately prorated based on the First Year annual amount. Thereinafter each successive "Year" of the Term shall commence on July 1 and run through June 30 of the next calendar.

Termination. This Agreement shall terminate at the expiration of the Term, or renewal thereof, without the necessity of any notice from NHPA to terminate the same. NHPA also reserves the right to terminate specific facilities at its sole discretion upon notice to CONTRACTOR.

Holding Over/Contract Term Extension. Upon mutual consent of the parties, in the absence of any agreement extending the Term hereof, this Agreement may continue on a month-to-month basis terminable by either party upon thirty (30) days' prior written notice. Such month-to-month term extension shall be subject to all conditions, provisions and obligations of this Agreement except that the compensation may be increased by application of the Consumer Price Index for All Urban Consumers (CPI-U), Northeast Region, CONTRACTOR's Labor Rate then in effect, or other such method as may be mutually agreed by the parties, as verified by proper documentation.

402. NHPA shall not be responsible or liable to CONTRACTOR or to those claiming by, through or under CONTRACTOR, for any loss or damage which may be occasioned by or through the acts or omissions of other persons, or otherwise, or for any loss or damage resulting to CONTRACTOR, or those claiming by, through or under CONTRACTOR, or its their property. To the maximum extent permitted by law, CONTRACTOR agrees to provide its services at CONTRACTOR's own risk.

SECTION 5: COMPENSATION

501. NHPA shall compensate the CONTRACTOR for satisfactory performance of the services required under this Agreement in a maximum amount not to exceed [REDACTED] Dollars and [REDACTED] Cents (\$ [REDACTED]).

A. Base Price.

Facility	Year 1	Year 2	Year 3	Year 4	Year 5
Air Rights Garage	N/A*	N/A*			
Crown Street Garage	N/A*	N/A*			
Granite Square Garage	N/A*	N/A*			
Temple Medical Garage	N/A*	N/A*			
Temple Street Garage	N/A*	N/A*			
270 State Street Garage	N/A*	N/A*			
Union Station Garage	N/A*	N/A*			
Elm/Orange Lot	N/A*	N/A*			
State/Wall Lot	N/A*	N/A*			
State/Chapel Lot	N/A*	N/A*			
State/Fair Lot	N/A*	N/A*			
State/Trumbull Lot	N/A*	N/A*			
State/Pulaski Lot	N/A*	N/A*			
Whalley/Blake Lot	N/A*	N/A*			
Under ARG Lot	N/A*	N/A*			
TOTAL	N/A*	N/A*			

*N/A = Not applicable as service price for the first 2 years is included in the installation price.

Facility	Year 6	Year 7	Year 8	Year 9	Year 10
Air Rights Garage					
Crown Street Garage					
Granite Square Garage					
Temple Medical Garage					
Temple Street Garage					
270 State Street Garage					
Union Station Garage					
Elm/Orange Lot					
State/Wall Lot					
State/Chapel Lot					
State/Fair Lot					
State/Trumbull Lot					
State/Pulaski Lot					
Whalley/Blake Lot					
Under ARG Lot					
TOTAL					

Grand Total (Years 1 through 10) = \$ _____

B. Added Options

C. Other Work. Other work requested by NHPA may also be performed by CONTRACTOR by negotiation upon mutually acceptable terms.

502. Compensation provided under this Section 5 constitutes full and complete payment for all costs assumed by CONTRACTOR in performing this Agreement including but not limited to salaries; taxes; fees; supervision; equipment; cost of materials and supplies; insurance; overhead; printing and reproduction; meetings, consultations, and presentations; postage; telephone; clerical support; travel; and all similar expenses.

503. Payments to CONTRACTOR under this Agreement shall be made by NHPA on approval of payment requisitions certified by a principal of CONTRACTOR submitted not more often than once a month, unless otherwise allowed by NHPA at its sole discretion. Each requisition shall be in a form acceptable to NHPA and shall set forth the services performed, an itemized cost breakdown allocating the expenses to a particular project or activity and cost center, the percentage of completion of the work or the hours of work expended, as applicable, and the compensation due to CONTRACTOR based upon the fee amount set forth in Section 501. Provided that the total contract amount is not exceeded unless otherwise increased by amendment, NHPA and CONTRACTOR may mutually agree to adjust line items to best meet Project needs. NHPA may, prior to making any payment under this Agreement, require CONTRACTOR to submit to it such additional information with respect to CONTRACTOR's costs as it deems necessary.

SECTION 6: TERMS AND CONDITIONS

601. This Agreement is subject to and incorporates the provisions attached hereto as New Haven Parking Authority Contract for Services Part II, Terms and Conditions. In the event any

provision of said Part II conflicts with any provision of this Part I of this Agreement, Part I shall be controlling.

602. This Agreement, its terms and conditions and any claims arising therefrom, shall be governed by Connecticut law. The CONTRACTOR shall comply with all applicable laws, ordinances, and codes of the State of Connecticut, the City of New Haven and NHPA, and shall commit no trespass on any private property in performing services under this Agreement.

603. THE PARTIES AGREE THAT THEY WAIVE A TRIAL BY JURY AS TO ANY AND ALL CLAIMS, CAUSES OF ACTION OR DISPUTE ARISING OUT OF THIS AGREEMENT OR SERVICES TO BE PROVIDED PURSUANT TO THIS AGREEMENT. NOTWITHSTANDING ANY SUCH CLAIM, DISPUTE, OR LEGAL ACTION, THE CONTRACTOR SHALL CONTINUE TO PERFORM SERVICES UNDER THIS AGREEMENT IN A TIMELY MANNER, UNLESS OTHERWISE DIRECTED BY NHPA. **NO PARTY WILL SEEK TO CONSOLIDATE ANY SUCH ACTION IN WHICH A JURY TRIAL HAS BEEN WAIVED WITH ANY OTHER ACTION IN WHICH A JURY TRIAL CANNOT BE OR HAS NOT BEEN WAIVED.**

604. NHPA and the CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party to this Agreement and to the partners, successors, assigns and legal representatives of such other party with respect to all covenants of this Agreement.

605. This Agreement incorporates all the understandings of the parties hereto and supersedes any and all agreements reached by the parties prior to the execution of this Agreement, whether oral or written.

606. If any provision of this Agreement is held invalid, the balance of the provisions of the Agreement shall not be affected thereby if the balance of the provisions of this Agreement would then continue to conform to the requirements of applicable laws.

607. Any waiver of the terms and conditions of this Agreement by either of the parties hereto shall not be construed to be a waiver of any other term or condition of this Agreement.

608. NHPA may, from time to time request changes in the scope of services of the CONTRACTOR to be performed hereunder. Such changes which are mutually agreed upon by and between NHPA and the CONTRACTOR, shall be incorporated in written amendments executed by both parties to this Agreement.

609. Pursuant to all applicable requirements set forth in the 2022 Lease, Operating, and Funding Agreement between the State of Connecticut, Department of Transportation and the City of New Haven for New Haven Union Station Campus, the CONTRACTOR shall comply with certain applicable provisions required as stated herein per enclosed Exhibit "A", regarding work affecting New Haven Union Station Campus.

610. Pursuant to all applicable requirements set forth in the Capital Funding Agreement between the State of Connecticut, Department of Transportation and the City of New Haven for

New Haven Union Station Campus, the CONTRACTOR shall comply with certain applicable provisions required as stated herein per enclosed Exhibit “A-1”, regarding work affecting New Haven Union Station Campus.

611. Except as otherwise specifically provided in this Agreement, whenever under this Agreement approvals, authorizations, determinations, satisfactions or waivers are required or permitted, such approvals, authorizations, determinations, satisfactions or waivers shall be effective and valid only when given in writing signed by a duly authorized officer of NHPA or the CONTRACTOR, and delivered in hand or sent by mail, postage prepaid, to the principal office of the party to whom it is directed, which until changed by written notice from one party to the other, are as follows:

NHPA:

New Haven Parking Authority
Attn: Executive Director
232 George Street
New Haven, CT 06510

With a copy to:

Rini and Associates
Attn: Joseph L. Rini, Esq.
216 Crown Street
New Haven, CT 06510
riniassoc@gmail.com

&

Cohen and Wolf, P.C.
Attn: Peter Okragly, Esq.
1115 Broad Street
Bridgeport, CT 06604
pokragly@cohenandwolf.com

CONTRACTOR

CONTRACTOR:

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed four (4) counterparts of this Agreement as of the day and year first above written.

WITNESS:

NEW HAVEN PARKING AUTHORITY*

_____ By: _____

Its: _____

(Duly Authorized)

*As to Union Station Campus only (Union Station Building, Union Station Garage, and State Street Station), pursuant to this Agreement, New Haven Parking Authority Acting as Station Manager, Parking Manager, and Brokerage Manager pursuant to the New Haven Union Station Campus, Lease, Operating and Funding Agreement and Management Agreement

CONTRACTOR COMPANY

By: _____

Its: _____

WITNESS:

(Duly Authorized)

NEW HAVEN PARKING AUTHORITY

CONTRACT FOR SERVICES

PART II: TERMS AND CONDITIONS

1. **Termination of Contract for Cause.** If, through any cause, the CONTRACTOR shall fail to fulfill in a timely and proper manner the CONTRACTOR's obligations under this Contract, or if the CONTRACTOR shall violate any of the covenants, agreements, or stipulations of this Contract, the New Haven Parking Authority ("NHPA") shall thereupon have the right to terminate this Contract by giving written notice to the CONTRACTOR of such termination and specifying the effective date thereof. In such event, all finished or unfinished documents, data, studies, and reports prepared by the CONTRACTOR under this Contract shall, at the option of NHPA, become NHPA's property, and the CONTRACTOR shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents.

Notwithstanding the above, the CONTRACTOR shall not be relieved of liability to NHPA for damages sustained by NHPA by virtue of any breach of the Contract by the CONTRACTOR, and NHPA may withhold any payments to the CONTRACTOR for the purpose of setoff until such time as the exact amount of damages due to NHPA from the CONTRACTOR is determined.

2. **Termination for Convenience of NHPA.** NHPA may terminate this Contract at any time by a notice in writing from NHPA to the CONTRACTOR. If the Contract is terminated by NHPA as provided herein, the CONTRACTOR will be paid an amount which bears the same ratio to the total compensation as the services actually performed bear to the total services of the CONTRACTOR covered by this Contract, less payments of compensation previously made.

3. **Changes.** NHPA may, from time to time, request changes in the scope of the services of the CONTRACTOR to be performed as described herein. Such changes, including but not limited to, any increase or decrease in the amount of the fees to be paid to the CONTRACTOR's compensation, which are mutually agreed upon by and between NHPA and the CONTRACTOR, shall be incorporated in written amendments to this Contract.

4. **Personnel.**

(a) The CONTRACTOR represents that it has, or will secure at its own expense, all personnel required in performing the services under this Contract. Such personnel shall not be employees of or have any contractual relationship with NHPA.

(b) All the services required hereunder will be performed by the CONTRACTOR or under the CONTRACTOR's supervision and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under Federal, State or local law to perform such services.

(c) No person who is serving sentence in a penal or correctional institution shall be employed on work under this Contract.

5. Anti-Kickback Rules. Salaries of architects, draftsmen, technical engineers, technicians and other persons performing work under this Contract shall be paid unconditionally and not less often than once a month without deduction or rebate on any account except only such payroll deductions as are mandatory by law or permitted by the applicable regulations issued by the Secretary of Labor pursuant to the "Anti-Kickback Act" of June 13, 1934 (48 Stat. 948; 62 Stat. 740; 63 Stat. 108; Title 18 U.S.C., Section 874; and Title 40 U.S.C., Section 276c). The CONTRACTOR shall comply with applicable "Anti-Kickback" regulations and shall insert appropriate provisions in all subcontracts covering work under this Contract to ensure compliance by subcontractors with such regulations, and shall be responsible for the submissions of affidavits required of subcontractors thereunder except as the Secretary of Labor may specifically provide for variations of or exemptions from the requirements thereof.

6. Equal Employment Opportunity. During the performance of this Contract, the CONTRACTOR agrees as follows:

- a. To comply with all applicable provisions of Executive Order 11246 and Executive Order 11375, Connecticut Fair Employment Practices Act, and the contract compliance ordinance of the City of New Haven, including all standards and regulations which are promulgated by the government authorities who established such acts and requirements, and all standards and regulations are incorporated herein by reference;
- b. Not to discriminate against any employee or applicant for employment because of race, color, religion, age, sex, physical disability or national origin. The CONTRACTOR will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to race, color, religion, sex, age, national origin or physical handicap. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship;
- c. To take such action, with respect to any SUBCONTRACTOR, as NHPA may direct as a means of enforcing the provisions of sub-paragraphs (a) through (e) herein.
- d. To file, along with its SUBCONTRACTORS, if any, compliance reports with NHPA in the form and to the extent prescribed in the contract by the contract compliance director of the City of New Haven. Compliance reports filed at such times as directed shall contain information as to the employment practices, policies, programs and statistics of the CONTRACTOR and its subcontractors, if any;

- e. To include the provisions of sub-paragraphs (a) through (e) of this equal opportunity clause in every subcontract or purchase order so that said provisions will be binding upon each such SUBCONTRACTOR or vendor;

7. Discrimination Because of Certain Labor Matters. No person employed on the work covered by this Contract shall be discharged or in any way discriminated against because they have filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or related to the labor standards applicable hereunder to their employer.

8. Compliance with Law. The CONTRACTOR shall comply with all applicable laws, ordinances, and codes of the Federal, State, and local governments, and shall commit no trespass on any public or private property in performing any of the work embraced by the Contract.

9. Subcontracting. None of the services covered by this Contract shall be subcontracted without the prior written consent of NHPA. The CONTRACTOR shall be as fully responsible to NHPA for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by the CONTRACTOR. The CONTRACTOR shall insert in each subcontract appropriate provisions requiring compliance with the labor standards provisions of this Contract.

10. Assignability. The CONTRACTOR shall not assign any interest in this Contract, and shall not transfer any interest in the same (whether by assignment or novation) without the prior written approval of NHPA; Provided, However, that claims for money due or to become due the CONTRACTOR from NHPA under this Contract, if any, may be assigned to a bank, trust, company, or other financial institution, or to a Trustee in Bankruptcy, without such approval. Notice of any such assignment or transfer shall be furnished promptly to NHPA.

11. Interest of NHPA Officials. No member of the governing body of NHPA, and no other officer, employee, or agent of NHPA who exercises any function or responsibilities in connection with the carrying out of the Project to which this Contract pertains, shall have any personal interest, direct or indirect, in this Contract.

12. Interest of CONTRACTOR. The CONTRACTOR covenants that it presently has no interest and shall not acquire any interest, direct or indirect, in the above-described Project Area or any parcels therein or any other interest which would conflict in any manner or degree with the performance of its services hereunder. The CONTRACTOR further covenants that in the performance of this Contract no person having any such interest shall be employed.

13. Findings Confidential. All of the services performed, prepared or assembled by the CONTRACTOR under this Contract are confidential and the CONTRACTOR agrees that they shall not be made available to any individual or organization without the prior written approval of NHPA.

14. Audit. NHPA reserves the right to audit the CONTRACTOR's books of account in relation to this Contract any time during the period of this Agreement or at any time during the

twelve-month period immediately following the closing or termination of this Contract. In the event NHPA elects to make such an audit, the CONTRACTOR shall immediately make available to NHPA all records pertaining to this Contract, including, but not limited to, payroll records, bank statements and cancelled checks.

Exhibit B
Scope of Services

SCOPE OF SERVICES

A brief description of the items to be included in the scope of services follows.
CONTRACTOR.

24-029 DRAFT PARCS Service Agreement

EXHIBIT “A”

REQUIREMENTS OF THE STATE OF CONNECTICUT

PURSUANT TO THE 2022 LEASE, OPERATING, AND FUNDING AGREEMENT BETWEEN THE CITY OF NEW HAVEN AND THE STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION FOR NEW HAVEN UNION STATION CAMPUS, THE CONTRACTOR SHALL COMPLY WITH CERTAIN PROVISIONS REQUIRED AS STATED HEREIN

I. INSURANCE REQUIREMENTS AT NEW HAVEN UNION STATION
CAMPUS FOR CONTRACTORS

- A. The following shall be listed as additional insureds to all policies on a primary and non-contributory basis for insurance coverages required by Items B(4), B(5), B(6), B(7), and B(8) to the extent allowed by law: the New Haven Parking Authority/Park New Haven, the City of New Haven, (and, as applicable, the State of Connecticut), and their respective officers, representatives, agents, servants, employees, successors and assigns. NHPA reserves the right to add entities to this list.
- B. With respect to the operations performed by the Contractor and those performed for the Contractor by its subcontractors, the Contractor shall carry, and/or require its subcontractors to carry, for the duration of the Contract, with the required additional insureds, the minimum liability insurance coverage set forth in the following items “B(1)” through “B(8)” at the Contractor’s expense:
1. **Worker’s Compensation and Employers’ Liability Insurance** as required by the laws of the State of Connecticut: Workers Compensation with Statutory Limits and Employers’ Liability with policy limit amounts not less than:
 - a. \$1,000,000 Each Accident (bodily injury by accident);
 - b. \$1,000,000 Disease – Policy limit (bodily injury by disease); and
 - c. \$1,000,000 Disease – Each Employee (bodily injury by disease).

When work is to be performed over or adjacent to navigable water, each Workers’ Compensation policy shall contain the U.S. Longshoreman’s and Harbor Workers’ Act endorsement with the limits in accordance with the laws of the United States.

2. **Builder’s Risk Insurance (***)unless otherwise specified, this relates to NHPA Construction Contracts ONLY***)**: in an amount equal to or greater than the

dollar value of the construction contract. The New Haven Parking Authority shall be named as Loss Payee. The City of New Haven (and, as applicable, the State of Connecticut) shall be listed as additional insureds.

3. **Owners' Protective Liability Insurance (**unless otherwise specified, this relates to NHPA Construction Contracts ONLY**):** for the benefit and in the name of the New Haven Parking Authority with policy limit amounts of not less than One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) aggregate.
4. **Commercial General Liability Insurance, including Contractual Liability Insurance,** for all damages arising out of bodily injuries to, or death of, all persons and/or out of injury to, or destruction of, property, with policy limit amounts not less than the following One Million Dollars (\$1,000,000) each occurrence, and, subject to that limit per accident, a total (or aggregate) limit of Two Million Dollars (\$2,000,000).
5. **Automobile Liability Insurance** covering the operation of all motor vehicles, including those hired or borrowed, that are used in connection with the Project for all damages arising out of bodily injuries to, or death of, all persons and/or out of injury to, or destruction of, property, providing a One Million Dollars (\$1,000,000) combined single limit.
6. **Umbrella/Excess Liability (**unless otherwise specified, depending on the scope of work**)** with limits of One Million Dollars (\$1,000,000) Each Occurrence and Aggregate. This Item B(6) shall be in addition to any umbrella/excess liability insurance that the Contractor may secure to satisfy the minimum limits required for Item B(4) Commercial General Liability and Item B(5) Automobile Liability Insurance using Umbrella Liability Insurance.
7. In the event the performance of any Contract involves **environmentally regulated substances or hazardous material exposure(s)**, Contractor's **Pollution Liability Insurance** with respect to the work and activities of the Contractor and/or their subcontractors, including but not limited to handling, transporting or disposing of any hazardous substances and/or environmentally regulated materials and any sudden and/or non-sudden pollution or impairment of the environment, including clean-up costs and defense with limits of liability specifically written for such Contract in the amount of at least Five Million Dollars (\$5,000,000). The Contractor and/or their subcontractors shall comply with all federal, state, and/or local laws, rules and regulations and shall obtain any additional coverage required by federal, state, or local government agencies. The Contractor's Pollution Liability Insurance shall be in effect from the date of written notice to proceed authorizing the work relating to the hazardous substances or other environmentally regulated materials and extend through the completion of the work.

8. In the event the performance of any Contract involves **construction or demolition work** performed by Contractor or its subcontractor(s) within fifty (50) feet of the railroad right-of way or State-owned rail property, with applicability determined by the State of Connecticut Department of Transportation, **Railroad Protective Liability Insurance** providing coverage of at least Two Million Dollars (\$2,000,000) for each accident or occurrence resulting in damages from (1) bodily injury to or death of all persons and/or (2) injury to or destruction of property and subject to that limit per accident or occurrence, an aggregate coverage of at least Six Million Dollars (\$6,000,000) for all damages during the policy period, and with all entities falling within any of the following listed categories named as insured parties: (i) the owner of the railroad right-of-way, including the State of Connecticut, (ii) the owner of any railcar licensed or permitted to travel within that affected portion of railroad right-of-way, (iii) the operator of any railcar licensed or permitted to travel within that affected portion of the railroad right-of-way, and (iv) any other party with an insurable interest. If such insurance is required by the State of Connecticut Department of Transportation, the Contractor shall obtain (or require its subcontractor to obtain, as applicable) such insurance and submit evidence of the minimum coverage indicated above to the NHPA and the City prior to the commencement of the rail-related work and/or activities. The Contractor or its subcontractor, as applicable, shall maintain such coverage until the work and/or activities is/are accepted. The following railroads have insurable interests including Metro-North Commuter Railroad Company, Metropolitan Transportation Authority (MTA), National Railroad Passenger Corporation (AMTRAK), CSX Transportation, Inc. & New York Central Lines, LLC, Providence & Worcester Railroad Company (P&W), and Transit America Services Inc./Alternate Concepts Inc. A Joint Venture.
9. In the event the performance of any Contract involves professional services, the Contractor or its applicable Subcontractors shall provide **Professional Liability Insurance** insuring against liability for professional services performed under this Contract in the amount of not less than Two Million Dollars (\$2,000,000) per occurrence, Two Million Dollars (\$2,000,000) aggregate. This policy shall remain in full force and effect from the date of any Contract through the longer of the expiration of the statute of limitations for actions against professional service providers (inclusive of extended injury limitation) or three (3) years from the date of completion of work by the Consultant or its subconsultant. It is understood that no terms and conditions of such insurance policy may be changed except upon the prior written approval of NHPA, which approval shall not be unreasonably withheld. This policy shall also include **pollution and environmental impairment coverage**, if such insurance is applicable to the services performed by the Consultant or subconsultant under any Contract, in the minimum amount of Two Million Dollars (\$2,000,000). The Consultant or subconsultant may provide pollution and environmental impairment coverage as stand-alone policy rather than as part of this Professional Liability Insurance policy.

10. **Policy Requirements:**

- a. All insurance coverages shall be primary.
 - b. All insurance policies shall be written by insurance company or companies satisfactory to the New Haven Parking Authority, as applicable, having a Financial Strength Rating of “A-” or higher and a Financial Size Rating of VIII or higher from A.M. Best Company.
 - c. Each insurance policy shall require that the insurance company agrees to investigate and defend the insured against all potential claims for damages, even if groundless.
 - d. All insurance policies shall also include a Waiver of Subrogation.
11. If any insurance policy is written on a “Claims Made” basis, the policy must be continually renewed for a minimum of two (2) years from the completion date of this Contract. If the policy is replaced and/or the retroactive date is changed, then the expiring policy must be endorsed to extend the reporting period for claims for the policy in effect during the contract for two (2) years from the completion date.
12. **Insurance Certificates:** The Contractor shall present original, completed Certificates of Insurance to the New Haven Parking Authority, 232 George Street, New Haven, CT 06510 prior to contract issuance. Contractor shall provide renewal certificates at least 30 days prior to the expiration date of the policies. Should any of the above-described policies be cancelled, limits reduced or coverage altered, 30 days written notice must be given to the New Haven Parking Authority.

II. STATE AND FEDERALLY REQUIRED PROVISIONS

A. The bid documents specify the applicable compliance requirements with Disadvantaged/Minority and Women Business Enterprises. Additionally, see the applicable provisions in Schedule 5 attached to this Agreement.

B. The Contractor shall comply with the applicable provisions set forth in Schedule 6 attached to this Agreement, including Title VI requirements that must flow-down to contractors and tenants: The Recipient in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S. C. §§ 2000d through 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

C. The Contractor acknowledges that it will comply with the applicable requirements under State law administered by the Connecticut Department of Labor, including but not limited to, standard wage (CGS § 31-57f) and prevailing wage (CGS § 31-53 and § 31-53a) that may apply to services performed under this Agreement.

D. CTDOT reserves the right to review contracts/agreements (to ensure required provisions included, whether by State requirement, e.g. State nondiscrimination, or by Federal requirement, e.g., Title VI, and any federal grant-specific requirements as may apply throughout the term) and reserves the right to direct removal of contractors throughout the term as CTDOT may determine, e.g., as a result of contractor violation of requirements, contractor suspension/disbarment from State work.

E. The Contractor shall comply with the requirements set forth in the “CTDOT Administrative and Statutory Requirements” attached as Schedule 7 to this Agreement.

Schedule 5

DBE Special Provisions Revised July 2020

I. ABBREVIATIONS AND DEFINITIONS AS USED IN THIS SPECIAL PROVISION

A. *Broker* means a party acting as an agent for others in negotiating Contracts, Agreements, purchases, sales, etc., in return for a fee or commission.

B. *Contract, Agreement or Subcontract* means a legally binding relationship obligating a seller to furnish supplies or services (including but not limited to, construction and professional services) and the buyer to pay for them. For the purposes of this provision, a lease for equipment or products is also considered to be a Contract.

C. *Contractor* means a consultant, second party or any other entity under Contract to do business with CTDOT or, as the context may require, with another Contractor (i.e. subcontractor) to CTDOT.

D. *CTDOT* means the Connecticut Department of Transportation.

E. *Disadvantaged Business Enterprise ("DBE")* means a for profit small business concern:

1. That is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals; and
2. Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it; and
3. Certified by CTDOT under Title 49 of the Code of Federal Regulations, Part 26, (Title 49 CFR Part 23 of the Code of Federal Regulations for Participation of Disadvantaged Business Enterprise in Airport Concessions)

F. *USDOT* means the U.S. Department of Transportation, including the Office of the Secretary, the Federal Highway Administration ("FHWA"), the Federal Transit Administration ("FTA"), and the Federal Aviation Administration ("FAA").

G. *USDOT-assisted Contract* means any Contract between CTDOT and a Contractor (at any tier) funded in whole or in part with USDOT financial assistance.

H. *Good Faith Efforts ("GFE")* means all necessary and reasonable steps to achieve a DBE goal or other requirement which by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.

I. *Small Business Concern* means, with respect to firms seeking to participate as DBEs in USDOT-assisted Contracts, a small business concern as defined pursuant to Section 3 of the Small Business Act and Small Business Administration ("SBA") regulations implementing it (13 CFR Part 121) that also does not exceed the cap on average annual gross receipts in 49 CFR Part 26, Section 26.65(b).

J. *Socially and Economically Disadvantaged Individual* means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is:

1. Any individual who CTDOT finds, on a case-by-case basis, to be a socially and economically disadvantaged individual.
2. Any individuals in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - “Black Americans”, which includes persons having origins in any of the Black racial groups of Africa;
 - “Hispanic Americans”, which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - “Native Americans”, which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians.
 - “Asian-Pacific Americans”, which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, or Federated States of Micronesia;
 - “Subcontinent Asian Americans”, which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;
 - Women;
 - Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

K. *Commercially Useful Function (“CUF”)* means the DBE is responsible for the execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved with its own forces and equipment. The DBE must be responsible for procuring, determining quantity, negotiating price, determining quality and paying for all materials (where applicable) associated with their work. The DBE must also perform at least 30% of the total cost of its contract with its own workforce.

II. ADMINISTRATIVE REQUIREMENTS

A. General Requirements

A DBE goal percentage equaling _____ percent (%) of the Contract value has been established for this Contract. This DBE goal percentage will be applied to the final Contract value to ultimately determine the required DBE goal. If additional work is required, DBE firms should be provided the appropriate opportunities to achieve the required DBE goal.

In order to receive credit toward the Contract DBE goal, the firms utilized as DBE subcontractors or suppliers must be certified as DBEs in the type of work to be counted for credit by CTDOT’s Office of Contract Compliance prior to the date of the execution of the subcontract. Neither CTDOT nor the State of Connecticut’s Unified Certification Program (UCP) makes any representation as to any DBE’s technical or financial ability to perform the work. Prime contractors are solely responsible for performing due diligence in hiring DBE subcontractors.

All DBEs shall perform a CUF for the work that is assigned to them. The Contractor shall monitor and ensure that the DBE is in compliance with this requirement. The Connecticut DBE UPC Directory of certified firms can be found on the CTDOT website <http://www.ct.gov/dot>. The directory lists certified DBE firms with a description of services that they are certified to perform. Only work identified in this listing may be counted towards the project’s

DBE goal. A DBE firm may request to have services added at any time by contacting CTDOT's Office of Contract Compliance. No credit shall be counted for any DBE firm found not to be performing a CUF.

Once a Contract is awarded, all DBEs that were listed on the pre-award DBE commitment document must be utilized. The Contractor is obligated to provide the value and items of the work originally established in the pre-award documentation to the DBE firms listed in the pre-award documentation. Any modifications to the pre-award commitment must follow the procedure established in Section II-C.

The Contractor shall designate a liaison officer who will administer the Contractor's DBE program. Upon execution of this Contract, the name of the liaison officer shall be furnished in writing to CTDOT's unit administering the Contract, CTDOT's Office of Contract Compliance and CTDOT's Office of Construction ("OOC"). Contact information for the designated liaison officer shall be furnished no later than the scheduled date for the pre-construction meeting.

The Contractor shall submit a bi-monthly report to the appropriate CTDOT unit administering the Contract. This report shall indicate what work has been performed to date, with the dollars paid and percentage of DBE goal completed.

Verified payments made to DBEs shall be included in this bi-monthly report. A sample form is included on the CTDOT website.

In addition, the report shall include:

1. A projected time frame of when the remaining work is to be completed for each DBE.
2. A statement by the Contractor either confirming that the approved DBEs are on schedule to meet the Contract goal, or that the Contractor is actively pursuing a GFE.
3. If retainage is specified in the Contract specifications, then a statement of certification that the subcontractors' retainage is being released in accordance with 1.08.01 (Revised or supplemented).

Failure by the Contractor to provide the required reports may result in CTDOT withholding an amount equal to one percent (1%) of the monthly estimate until the required documentation is received.

The Contractor shall receive DBE credit when a DBE, or any combination of DBEs, perform work under the Contract in accordance with this specification.

Only work actually performed by and/or services provided by DBEs which are certified for such work and/or services, as verified by CTDOT, can be counted toward the DBE goal. Supplies and equipment a DBE purchases or leases from the Contractor or its affiliate cannot be counted toward the goal.

Monitoring of the CUF will occur by CTDOT throughout the life of the project. If it is unclear that the DBE is performing the work specified in its subcontract with the prime Contractor, further review may be required. If it is determined that the DBE is not performing a CUF, then the work performed by that DBE will not be counted towards the DBE goal percentage.

B. Subcontract Requirements

The Contractor shall submit to CTDOT's OOC all requests for subcontractor approvals on the standard CLA-12 forms provided by CTDOT. The dollar amount and items of work identified on the CLA-12 form must, at minimum, equal the dollar value submitted in the pre-award commitment. CLA-12 forms can be found at

<http://www.ct.gov/dot/construction> under the "Subcontractor Approval" section. All DBE subcontractors must be identified on the CLA-12 form, regardless of whether they are being utilized to meet a Contract goal percentage. A copy of the legal Contract between the Contractor and the DBE subcontractor/supplier, a copy of the Title VI Contractor Assurances and a copy of the Required Contract Provision for Federal Aid Construction Contracts (Form FHWA-1273) (Federal Highway Administration projects only) must be submitted along with a request for subcontractor approval. These attachments cannot be substituted by reference.

If retainage is specified in the Contract specifications, then the subcontract agreement must contain a prompt payment mechanism that acts in accordance with Article 1.08.01 (Revised or supplemented).

If the Contract specifications do not contain a retainage clause, the Contractor shall not include a retainage clause in any subcontract agreement, and in this case, if a Contractor does include a retainage clause, it shall be deemed unenforceable.

In addition, the following documents are to be included with the CLA-12, if applicable:

- An explanation indicating who will purchase material.
- A statement explaining any method or arrangement for utilization of the Contractor's equipment.

The subcontract must show items of work to be performed, unit prices and, if a partial item, the work involved by all parties. If the subcontract items of work or unit prices are modified, the procedure established in Section II-C must be followed.

Should a DBE subcontractor further sublet items of work assigned to it, only lower tier subcontractors who are certified as a DBE firm will be counted toward the DBE goal. If the lower tier subcontractor is a non-DBE firm, the value of the work performed by that firm will not be counted as credit toward the DBE goal.

The use of joint checks between a DBE firm and the Contractor is acceptable, provided that written approval is received from the OOC prior to the issuance of any joint check. Should it become necessary to issue a joint check between the DBE firm and the Contractor to purchase materials, the DBE firm must be responsible for negotiating the cost, determining the quality and quantity, ordering the material and installing (where applicable), and administering the payment to the supplier. The Contractor should not make payment directly to suppliers.

Each subcontract the Contractor signs with a subcontractor must contain the following assurance:

"The subcontractor/supplier/manufacture shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor/subcontractor/supplier/manufacture to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate."

C. Modification to Pre-Award Commitment

Contractors may not terminate for convenience any DBE subcontractor or supplier that was listed on the pre-award DBE commitment without prior written approval of the OOC. This includes, but is not limited to, instances in which a Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Prior to approval, the Contractor must demonstrate to the satisfaction of the OOC, that it has good cause, as found in 49CFR Part 26.53 (f)(3), for termination of the DBE firm.

Before transmitting its request for approval to terminate pre-award DBE firms to the OOC, the Contractor must give written notice to the DBE subcontractor and include a copy to the OOC of its notice to terminate and/or substitute, and the reason for the notice.

The Contractor must provide five (5) days for the affected DBE firm to respond. This affords the DBE firm the opportunity to advise the OOC and the Contractor of any reasons why it objects to the termination of its subcontract and why the OOC should not approve the Contractor's action.

Once the Contract is awarded, should there be any amendments or modifications of the approved pre-award DBE submission other than termination of a DBE firm, the Contractor shall follow the procedure below that best meets the criteria associated with the reason for modification:

1. If the change is due to a scope of work revision or non-routine quantity revision by CTDOT, the Contractor must notify CTDOT's OOC in writing or via electronic mail that their DBE participation on the project may be impacted as soon as they are aware of the change. In this case, a release of work from the DBE firm may not be required; however the Contractor must concurrently notify the DBE firm in writing, and copy the OOC for inclusion in the project DBE file. This does not relieve the Contractor of its obligation to meet the Contract specified DBE goal, or of any other responsibility found in this specification.
2. If the change is due to a factor other than a CTDOT directive, a request for approval in writing or via electronic mail of the modification from the OOC must be submitted, along with an explanation of the change(s), prior to the commencement of work. The Contractor must also obtain a letter of release from the originally named DBE indicating their concurrence with the change, and the reason(s) for their inability to perform the work. In the event a release cannot be obtained, the Contractor must document all efforts made to obtain it.
3. In the event a DBE firm that was listed in the pre-award documents is **unable** or **unwilling** to perform the work assigned, the Contractor shall:
 - Notify the OOC Division Chief immediately and make efforts to obtain a release of work from the firm.
 - Submit documentation that will provide a basis for the change to the OOC for review and approval prior to the implementation of the change.
 - Use the DBE Directory to identify and contact firms certified to perform the type of work that was assigned to the unable or unwilling DBE firm. The Contractor should also contact CTDOT's Office of Contract Compliance for assistance in locating additional DBE firms to the extent needed to meet the contract goal.

Should a DBE subcontractor be terminated or fail to complete work on the Contract for any reason, the Contractor must make a GFE to find another DBE subcontractor to substitute for the original DBE. The DBE replacement shall be given every opportunity to perform at least the same amount of work under the Contract as the original DBE subcontractor.

If the Contractor is unable to find a DBE replacement:

- The Contractor should identify other contracting opportunities and solicit DBE firms in an effort to meet the Contract DBE goal requirement, if necessary, and provide documentation to support a GFE. (Refer to GFE in Section III.)

- The Contractor must demonstrate that the originally named DBE, who is unable or unwilling to perform the work assigned, is in default of its subcontract, or identify other issues that affected the DBE firm's ability to perform the assigned work. **The Contractor's ability to negotiate a more advantageous agreement with another subcontractor is not a valid basis for change.**

III. GOOD FAITH EFFORTS

The DBE goal is **NOT** reduced or waived for projects where the Contractor receives a Pre-Award GFE determination from the Office of Contract Compliance prior to the award of the Contract. It remains the responsibility of the Contractor to make a continuing GFE to achieve the specified Contract DBE goal. The Contractor shall pursue every available opportunity to obtain additional DBE firms and document all efforts made in such attempts.

At the completion of all Contract work, the Contractor shall submit a final report to CTDOT's unit administering the Contract indicating the work done by and the dollars paid to DBEs. Only verified payments made to DBEs performing a CUF will be counted towards the Contract goal.

Goal attainment is based on the total Contract value, which includes all construction orders created during the Contract. If the Contractor does not achieve the specified Contract goal for DBE participation or has not provided the value of work to the DBE firms originally committed to in the pre-award submission, the Contractor shall submit documentation to CTDOT's unit administering the Contract detailing the GFE made during the performance of the Contract to satisfy the goal.

A GFE should consist of the following, where applicable (CTDOT reserves the right to request additional information):

1. A detailed statement of the efforts made to replace an unable or unwilling DBE firm, and a description of any additional subcontracting opportunities that were identified and offered to DBE firms in order to increase the likelihood of achieving the stated goal.
2. A detailed statement, including documentation of the efforts made to contact and solicit bids from certified DBEs, including the names, addresses, and telephone numbers of each DBE firm contacted; the date of contact and a description of the information provided to each DBE regarding the scope of services and anticipated time schedule of work items proposed to be subcontracted and the response from firms contacted.
3. Provide a detailed explanation for each DBE that submitted a subcontract proposal which the Contractor considered to be unacceptable stating the reason(s) for this conclusion.
4. Provide documentation, if any, to support contacts made with CTDOT requesting assistance in satisfying the specified Contract goal.
5. Provide documentation of all other efforts undertaken by the Contractor to meet the defined goal. Additional documentation of efforts made to obtain DBE firms may include but will not be limited to:
 - Negotiations held in good faith with interested DBE firms, not rejecting them without sound reasons.
 - Written notice provided to a reasonable number of specific DBE firms in sufficient time to allow effective participation.
 - Those portions of work that could be performed by readily available DBE firms.

In instances where the Contractor can adequately document or substantiate its GFE and compliance with other DBE Program requirements, the Contractor will have satisfied the DBE requirement and no administrative remedies will be imposed.

IV. PROJECT COMPLETION

At the completion of all Contract work, the Contractor shall:

1. Submit a final report to CTDOT's unit administering the Contract indicating the work done by, and the dollars paid to DBEs.
2. Submit verified payments made to all DBE subcontractors for the work that was completed.
3. Submit documentation detailing any changes to the DBE pre-award subcontractors that have not met the original DBE pre-award commitment, including copies of the Department's approvals of those changes.
4. Retain all records for a period of three (3) years following acceptance by CTDOT of the Contract and those records shall be available at reasonable times and places for inspection by authorized representatives of CTDOT and Federal agencies. If any litigation, claim, or audit is started before the expiration of the three (3) year period, the records shall be retained until all litigation, claims, or audit findings involving the records are resolved.

If the Contractor does not achieve the specified Contract goal for DBE participation in addition to meeting the dollar value committed to the DBE subcontractors identified in the pre-award commitment, the Contractor shall submit documentation to CTDOT's unit administering the Contract detailing the GFE made during the performance of the Contract to satisfy the goal.

V. SHORTFALLS

A. Failure to meet DBE goals

As specified in (II-A) above, attainment of the Contract DBE goal is based on the final Contract value. The Contractor is expected to achieve the amount of DBE participation originally committed to at the time of award; however, additional efforts must be made to provide opportunities to DBE firms in the event a Contract's original value is increased during the life of the Contract.

The Contractor is expected to utilize the DBE subcontractors originally committed in the DBE pre-award documentation for the work and dollar value that was originally assigned.

If a DBE is terminated or is unable or unwilling to complete its work on a Contract, the Contractor shall make a GFE to replace that DBE with another certified DBE to meet the Contract goal.

The Contractor shall immediately notify the OOC of the DBE's inability or unwillingness to perform, and provide reasonable documentation and make efforts to obtain a release of work from the firm.

If the Contractor is unable to find a DBE replacement, then the Contractor should identify other contracting opportunities and solicit DBE firms in an effort to meet the Contract DBE goal requirement, if necessary, and provide documentation to support a GFE.

When a DBE is unable or unwilling to perform, or is terminated for just cause, the Contractor shall make a GFE to find other DBE opportunities to increase DBE participation to the extent necessary to at least satisfy the Contract goal.

For any DBE pre-award subcontractor that has been released appropriately from the project, no remedy will be assessed, provided that the Contractor has met the criteria described in Section II-C.

B. Administrative Remedies for Non-Compliance:

In cases where the Contractor has failed to meet the Contract specified DBE goal or the DBE pre-award commitment, and where no GFE has been demonstrated, then one or more of the following administrative remedies will be applied:

1. A reduction in Contract payments to the Contractor as determined by CTDOT, not to exceed the shortfall amount of the **DBE goal**. The maximum shortfall will be calculated by multiplying the Contract DBE goal (adjusted by any applicable GFE) by the final Contract value, and subtracting any verified final payments made to DBE firms by the Contractor.
2. A reduction in Contract payments to the Contractor determined by CTDOT, not to exceed the shortfall amount of the **pre-award commitment**. The maximum shortfall will be calculated by subtracting any verified final payments made by the Contractor to each DBE subcontractor from the amount originally committed to that subcontractor in the pre-award commitment.
3. A reduction in Contract payments to the Contractor determined by CTDOT for any pre-award DBE subcontractor who has not obtained the dollar value of work identified in the DBE pre-award commitment and has not followed the requirements of Section II-C or for any DBE firm submitted for DBE credit that has not performed a CUF.
4. The Contractor being required to submit a written DBE Program Corrective Action Plan to CTDOT for review and approval, which is aimed at ensuring compliance on future projects.
5. The Contractor being required to attend a Non-Responsibility Meeting on the next contract where it is the apparent low bidder.
6. The Contractor being suspended from bidding on contracts for a period not to exceed six (6) months.

VI. CLASSIFICATIONS OTHER THAN SUBCONTRACTORS

A. Material Manufacturers

Credit for DBE manufacturers is 100% of the value of the manufactured product. A manufacturer is a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Contractor.

If the Contractor elects to utilize a DBE manufacturer to satisfy a portion of, or the entire specified DBE goal, the Contractor must provide the OOC with:

- Subcontractor Approval Form (CLA-12) indicating the firm designation,
- An executed "Affidavit for the Utilization of Material Suppliers or Manufacturers" (sample attached), and
- Substantiation of payments made to the supplier or manufacturer for materials used on the project.

B. Material Suppliers (Dealers)

Credit for DBE dealers/suppliers is limited to 60% of the value of the material to be supplied, provided such material is obtained from an approved DBE dealer/supplier.

In order for a firm to be considered a regular dealer, the firm must own, operate, or maintain a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. At least one of the following criteria must apply:

- To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.
- A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating or maintaining a place of business if the person both owns and operates distribution equipment for the products. Any supplementing of the regular dealers' own distribution equipment shall be by long term lease agreement, and not on an ad hoc or contract to contract basis.
- Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this paragraph.

If the Contractor elects to utilize a DBE supplier to satisfy a portion or the entire specified DBE goal, the Contractor must provide the OOC with:

- Subcontractor Approval Form (CLA-12) indicating the firm designation,
- An executed "Affidavit for the Utilization of Material Suppliers or Manufacturers" (sample attached), and
- Substantiation of payments made to the supplier or manufacturer for materials used on the project.

C. Brokering

- Brokering of work for DBE firms who have been listed by the Department as certified brokers is allowed. Credit for those firms shall be applied following the procedures in Section VI-D.
- Brokering of work by DBEs who have been approved to perform subcontract work with their own workforce and equipment is not allowed, and is a Contract violation.
- Firms involved in the brokering of work, whether they are DBEs and/or majority firms who engage in willful falsification, distortion or misrepresentation with respect to any facts related to the project shall be referred to the U.S. DOT, Office of the Inspector General for prosecution under Title 18, U.S. Code, Part I, Chapter 47, Section 1020.

D. Non-Manufacturing or Non-Supplier DBE Credit

Contractors may count towards their DBE goals the following expenditures with DBEs that are not manufacturers or suppliers:

- Reasonable fees or commissions charged for providing a bona fide service such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment materials or supplies necessary for the performance of the Contract, provided that the fee or commission is determined by the OOC to be reasonable and consistent with fees customarily allowed for similar services.
- The fees charged only for delivery of materials and supplies required on a job site when the hauler, trucker, or delivery service is a DBE, and not the manufacturer, or regular dealer of the materials and supplies, and provided that the fees are determined by the OOC to be reasonable and not excessive as compared with fees customarily allowed for similar services.
- The fees or commissions charged for providing bonds or insurance specifically required for the performance of the Contract, provided that the fees or commissions are determined by CTDOT to be reasonable and not excessive as compared with fees customarily allowed for similar services.

E. Trucking

While technically still considered a subcontractor, the rules for counting credit for DBE trucking firms are as follows:

- The DBE must own and operate at least one fully licensed, insured, and operational truck used on the Contract.
- The DBE receives credit for the total value of the transportation services it provides on the Contract using trucks it owns, insures and operates using drivers it employs.
- The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Contract.
- The DBE may lease trucks from a non-DBE firm; however the DBE may only receive credit for any fees or commissions received for arranging transportation services provided by the non-DBE firms. Additionally, the DBE firm must demonstrate that they are in full control of the trucking operation for which they are seeking credit.

VII. Suspected DBE Fraud

In appropriate cases, CTDOT will bring to the attention of the USDOT any appearance of false, fraudulent, or dishonest conduct in connection with the DBE program, so that USDOT can take the steps, e.g. referral to the Department of Justice for criminal prosecution, referral to USDOT Inspector General, action under suspension and debarment or Program Fraud and Civil Penalties rules provided in 49 CFR Part 31.

**CONNECTICUT DEPARTMENT OF TRANSPORTATION
(OFFICE OF CONSTRUCTION)
BUREAU OF ENGINEERING AND CONSTRUCTION**

This affidavit must be completed by the State Contractor's DBE notarized and attached to the contractor's request to utilize a DBE supplier or manufacturer as a credit towards its DBE contract requirements; failure to do so will result in not receiving credit towards the contract DBE requirement.

State Contract No. _____

Federal Aid Project No. _____

Description of Project _____

I, _____, acting in behalf of _____,
(Name of person signing Affidavit) (DBE person, firm, association or corporation)

of which I am the _____ certify and affirm that _____
(Title of Person) (DBE person, firm, association or corporation)

is a certified Connecticut Department of Transportation DBE. I further certify and affirm that I have read and understand 49 CFR, Sec. 26.55(e)(2), as the same may be revised.

I further certify and affirm that _____ will assume the actual and
(DBE person, firm, association or Corporation)

for the provision of the materials and/or supplies sought by _____.

If a manufacturer, I operate or maintain a factory or establishment that produces, on the premises, the materials, supplies, articles or equipment required under the contract an of the general character described by the specifications.

If a supplier, I perform a commercially useful function in the supply process. As a regular dealer, I, at a minimum, own and operate the distribution equipment for bulk items. Any supplementing of my distribution equipment shall be by long-term lease agreement, and not on an ad hoc or contract-by-contract basis.

I understand that false statements made herein are punishable by Law (Sec. 53a-157), CGS, as revised).

(Name of Corporation or Firm)

(Signature & Title of Official making the Affidavit)

Subscribed and sworn to before me, this _____ day of _____ 20 _____.

Notary Public (Commissioner of the Superior Court)

My Commission Expires _____

CERTIFICATE OF CORPORATION

I, _____, certify that I am the _____
(Official) (President)

of the Corporation named in the foregoing instrument; that I have been duly authorized to affix the seal of the Corporation to such papers as require the seal; that _____, who signed said instrument on behalf of the Corporation, was then _____ of said corporation; that said instrument was duly signed for and in behalf of said Corporation by authority of its governing body and is within the scope of its corporation powers.

(Signature of Person Certifying)

(Date)

GENERAL

Schedule 6

TITLE VI CONTRACTOR ASSURANCES

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Regulations relative to Nondiscrimination in Federally-assisted programs of the United States Department of Transportation Federal Highway Administration and Federal Transit Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin, sex, age, disability, income or Limited English Proficiency in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration or Federal Transit Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor will so certify to the Recipient or the Federal Highway Administration or the Federal Transit Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Non-compliance:** In the event of the contractor's non-compliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration or the Federal Transit Administration may determine to be appropriate, including, but not limited to:

- a. withholding contract payments to the contractor under the contract until the contractor complies; and/or
- b. cancelling, terminating, or suspending a contract, in whole or in part.

TITLE VI CONTRACTOR ASSURANCES - page 2

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration or the Federal Transit Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with, litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

TITLE VI CONTRACTOR ASSURANCES - page 3

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 4 71, Section 4 7123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to -ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U .S.C. 1681 et seq)

Schedule 7

CTDOT ADMINISTRATIVE AND STATUTORY REQUIREMENTS

1. For the purposes of this Schedule,

“Agency” means CTDOT;

“Business Associate” is defined in 45 C.F.R. § 160.103;

“Contract” means this Agreement;

“Contractor” means CITY; and

“Contractor Parties” means City Parties.

2. Whistleblowing. This Contract may be subject to the provisions of Section 4-61dd of the Connecticut General Statutes. In accordance with this statute, if an officer, employee or appointing authority of the Contractor takes or threatens to take any personnel action against any employee of the Contractor in retaliation for such employee's disclosure of information to any employee of the contracting state or quasi-public agency or the Auditors of Public Accounts or the Attorney General under the provisions of subsection (a) of such statute, the Contractor shall be liable for a civil penalty of not more than five thousand dollars for each offense, up to a maximum of twenty per cent of the value of this Contract. Each violation shall be a separate and distinct offense and in the case of a continuing violation, each calendar day's continuance of the violation shall be deemed to be a separate and distinct offense. The State may request that the Attorney General bring a civil action in the Superior Court for the Judicial District of Hartford to seek imposition and recovery of such civil penalty. In accordance with subsection (f) of such statute, each large state contractor, as defined in the statute, shall post a notice of the provisions of the statute relating to large state contractors in a conspicuous place which is readily available for viewing by the employees of the Contractor.

3. Forum and Choice of Law. The parties deem the Contract to have been made in the City of Hartford, State of Connecticut. Both parties agree that it is fair and reasonable for the validity and construction of the Contract to be, and it shall be, governed by the laws and court decisions of the State of Connecticut, without giving effect to its principles of conflicts of laws. To the extent that any immunities provided by Federal law or the laws of the State of Connecticut do not bar an action against the State, and to the extent that these courts are courts of competent jurisdiction, for the purpose of venue, the complaint shall be made returnable to the Judicial District of Hartford only or shall be brought in the United States District Court for the District of Connecticut only, and shall not be transferred to any other court, provided, however, that nothing here constitutes a waiver or compromise of the sovereign immunity of the State of Connecticut. The Contractor waives any objection which it may now have or will have to the laying of venue of any Claims in any forum and further irrevocably submits to such jurisdiction in any suit, action or proceeding.

4. Sovereign Immunity. The parties acknowledge and agree that nothing in the Solicitation or the Contract shall be construed as a modification, compromise or waiver by the State of any rights or defenses of any immunities provided by Federal law or the laws of the State of Connecticut to the State or any of its officers and employees, which they may have had, now have or will have with respect to all matters arising out of the Contract. To the extent that this section conflicts with any

other section, this section shall govern.

5. Audit and Inspection of Plants, Places of Business and Records.

- (a) The State and its agents, including, but not limited to, the Connecticut Auditors of Public Accounts, Attorney General and State's Attorney and their respective agents, may, at reasonable hours, inspect and examine all of the parts of the Contractor's and Contractor Parties' plants and places of business which, in any way, are related to, or involved in, the performance of this Contract.
- (b) The Contractor shall maintain, and shall require each of the Contractor Parties to maintain, accurate and complete Records. The Contractor shall make all of its and the Contractor Parties' Records available at all reasonable hours for audit and inspection by the State and its agents.
- (c) The State shall make all requests for any audit or inspection in writing and shall provide the Contractor with at least twenty-four (24) hours' notice prior to the requested audit and inspection date. If the State suspects fraud or other abuse, or in the event of an emergency, the State is not obligated to provide any prior notice.
- (d) The Contractor shall pay for all costs and expenses of any audit or inspection which reveals information that, in the sole determination of the State, is sufficient to constitute a breach by the Contractor under this Contract. The Contractor shall remit full payment to the State for such audit or inspection no later than 30 days after receiving an invoice from the State. If the State does not receive payment within such time, the State may setoff the amount from any moneys which the State would otherwise be obligated to pay the Contractor in accordance with this Contract's setoff provision.
- (e) The Contractor shall keep and preserve or cause to be kept and preserved all of its and Contractor Parties' Records until three (3) years after the latter of (i) final payment under this Agreement, or (ii) the expiration or earlier termination of this Agreement, as the same may be modified for any reason. The State may request an audit or inspection at any time during this period. If any Claim or audit is started before the expiration of this period, the Contractor shall retain or cause to be retained all Records until all Claims or audit findings have been resolved.
- (f) The Contractor shall cooperate fully with the State and its agents in connection with an audit or inspection. Following any audit or inspection, the State may conduct and the Contractor shall cooperate with an exit conference.
- (g) The Contractor shall incorporate this entire Section verbatim into any contract or other agreement that it enters into with any Contractor Party.

6. Protection of Confidential Information.

- (a) Contractor and Contractor Parties, at their own expense, have a duty to and shall protect from a Confidential Information Breach any and all Confidential Information which they come to possess or control, wherever and however stored or maintained, in a commercially reasonable manner in accordance with current industry standards.
- (b) Each Contractor or Contractor Party shall develop, implement and maintain a comprehensive data - security program for the protection of Confidential Information. The safeguards contained in such program shall be consistent with and comply with the safeguards for

protection of Confidential Information, and information of a similar character, as set forth in all applicable federal and state law and written policy of the Agency or State concerning the confidentiality of Confidential Information. Such data-security program shall include, but not be limited to, the following:

1. A security policy for employees related to the storage, access and transportation of data containing Confidential Information;
2. Reasonable restrictions on access to records containing Confidential Information, including access to any locked storage where such records are kept;
3. A process for reviewing policies and security measures at least annually;
4. Creating secure access controls to Confidential Information, including but not limited to passwords; and
5. Encrypting of Confidential Information that is stored on laptops, portable devices or being transmitted electronically.

- (c) The Contractor and Contractor Parties shall notify the Agency and the Connecticut Office of the Attorney General as soon as practical, but no later than twenty-four (24) hours, after they become aware of or suspect that any Confidential Information which Contractor or Contractor Parties have come to possess or control has been subject to a Confidential Information Breach. If a Confidential Information Breach has occurred, the Contractor shall, within three (3) business days after the notification, present a credit monitoring and protection plan to the Commissioner of Administrative Services, the Agency and the Connecticut Office of the Attorney General, for review and approval. Such credit monitoring or protection plan shall be made available by the Contractor at its own cost and expense to all individuals affected by the Confidential Information Breach. Such credit monitoring or protection plan shall include, but is not limited to reimbursement for the cost of placing and lifting one (1) security freeze per credit file pursuant to Connecticut General Statutes § 36a-701a. Such credit monitoring or protection plans shall be approved by the State in accordance with this Section and shall cover a length of time commensurate with the circumstances of the Confidential Information Breach. The Contractors' costs and expenses for the credit monitoring and protection plan shall not be recoverable from the Agency, any State of Connecticut entity or any affected individuals.
- (d) The Contractor shall incorporate the requirements of this Section in all subcontracts requiring each Contractor Party to safeguard Confidential Information in the same manner as provided for in this Section.
- (e) Nothing in this Section shall supersede in any manner Contractor's or Contractor Party's obligations pursuant to HIPAA or the provisions of this Contract concerning the obligations of the Contractor as a Business Associate of the Agency.

7. Executive Orders and Other Enactments.

- (a) All references in this Contract to any Federal, State, or local law, statute, public or special act, executive order, ordinance, regulation or code (collectively, "Enactments") shall mean Enactments that apply to the Contract at any time during its term, or that may be made applicable to the Contract

during its term. This Contract shall always be read and interpreted in accordance with the latest applicable wording and requirements of the Enactments. At the Contractor's request, the Agency shall provide a copy of these Enactments to the Contractor. Unless otherwise provided by Enactments, the Contractor is not relieved of its obligation to perform under this Contract if it chooses to contest the applicability of the Enactments or the Agency's authority to require compliance with the Enactments.

(b) This Contract is subject to the provisions of Executive Order No. 3 of Governor Thomas J. Meskill, promulgated June 16, 1971, concerning labor employment practices, Executive Order No. 17 of Governor Thomas J. Meskill, promulgated February 15, 1973, concerning the listing of employment openings and Executive Order No. 16 of Governor John G. Rowland promulgated August 4, 1999, concerning violence in the workplace, all of which are incorporated into and are made a part of the Contract as if they had been fully set forth in it.

(c)The Contract may be subject to (1) Executive Order No. 14 of Governor M. Jodi Rell, promulgated April 17, 2006, concerning procurement of cleaning products and services; (2) Executive Order No. 61 of Governor Dannel P. Malloy promulgated December 13, 2017 concerning the Policy for the Management of State Information Technology Projects, as issued by the Office of Policy and Management, Policy ID IT-SDLC-17-04; and (3) Executive Order Nos. 13F and 13G of Governor Ned Lamont, promulgated September 3, 2021 and September 10, 2021, respectively, concerning protection of public health and safety during COVID-19 pandemic, as extended by Executive Order No. 14A of Governor Ned Lamont, promulgated September 30, 2021. If any of the Executive Orders referenced in this section is applicable, it is deemed to be incorporated into and made a part of the Contract as if fully set forth in it.

EXHIBIT A-1

ADDITIONAL REQUIREMENTS OF THE CAPITAL FUNDING AGREEMENT FOR NEW HAVEN UNION STATION CAMPUS

1. Retention of Records and Records Accessibility

A. All services performed by the Contractor (the “Services”) shall be subject to the inspection and approval of the State (CTDOT), the City of New Haven (the “City”), and New Haven Parking Authority (“NHPA”) at all times, and the Contractor shall furnish all information concerning the Services. CTDOT, the City, and NHPA or their representatives shall have the right, at reasonable hours, to inspect or examine the part of the plant or place of business or any books, records, and other documents of Contractor, or its subcontractors of any tier (collectively, “Contractor”) pertaining to work performed under this Agreement and shall allow such representatives free access to any and all such plants, places of business, books and records. CTDOT, the City and NHPA or their representatives will give the Contractor or its subcontractor at least twenty-four (24) hours’ notice of such intended examination. At CTDOT’s, City’s or NHPA’s request, the Contractor and/or its subcontractors shall provide CTDOT, City, and NHPA with hard copies or an electronic format of any data or information in the possession or control of the Contractor or Subcontractor which pertains to CTDOT’s, City’s, and NHPA’s business under this agreement.

B. The Contractor shall retain and maintain accurate records and documents relating to performance of services under this agreement for a minimum of three (3) years starting from the date of submission of the final expenditure report with the following qualifications and shall make them available for inspection and audit by CTDOT, City, and NHPA or their representative:

- (1) If any litigation, claim or audit is started before the expiration date of the three-year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved; and
- (2) Records for the purchase of equipment (i.e., non-expendable, tangible personal property) acquired with Funding pursuant to this Agreement shall be retained for three years after the final disposition of said property.

C. The Contractor shall require all subcontractors and others performing the Project to retain and maintain accurate records and documents relating to performance on the Project for a minimum of three (3) years from the expiration of the contract and shall make them available for inspection and audit by the Operations Committee and CTDOT, City, and NHPA or their representative. The Contractor must incorporate this paragraph verbatim into any agreement it enters into with any subcontractor or other party performing under this Agreement.

2. Employees & Subcontractors

A. The Contractor shall maintain, and shall require its subcontractors and other parties to the Agreement, to maintain complete control over its employees and all of its contractors engaged to perform work for the Project. Before hiring outside contractors/subcontractors or entering into contractual agreements with persons, partnerships or companies related to performance of the Project, the Contractor will notify CTDOT, City, and NHPA.

B. The Contractor shall require all of its subcontractors or other parties connected to this Project to flow down all applicable requirements for the Project as set forth in this Agreement. CTDOT, City, and NHPA reserve the right to review any contract between the Contractor and/or its subcontractors or other affected parties performing the services on the Project prior to the Contractor or executing such contract. CTDOT, City, and NHPA reserve the right to direct the Consultant, and the Parties, by way of their representatives comprising the New Haven Union Station Partnership Operations Committee, to direct the Contractor to remove any employee, subcontractor, or other relevant party, or personnel of the Contractor throughout the duration of the Project as a result of the party's suspension or disbarment from State, City, or NHPA work or violation of requirements under this Agreement in its sole discretion.

C. In performance of the Project, the Contractor shall comply with all requirements under State law for Set-aside goal setting and reporting to the Commission on Human Rights and Opportunities.

D. The Contractor shall comply with State law and regulations administered by the Connecticut Department of Labor, including but not limited to, standard wage (CGS § 31-57f) and prevailing wage (CGS § 31-53 and § 31-53a) as applicable to performance of the Project or under this Agreement.

3. Americans with Disabilities Act

The Contractor shall ensure the Project complies with the terms of the Americans with Disabilities Act of 1990 during the Project period. The Contractor represents that it is familiar with the terms of this Act and that it is in compliance with the law. Failure of the Contractor to satisfy this standard during the Project period, as it may be amended, will render the Contract voidable at the option of CTDOT, City, and NHPA upon notice to the Consultant. The Contractor warrants that it will hold the State including CTDOT, City, and NHPA harmless from any liability, which may be imposed upon the State, CTDOT, City, and/or NHPA as a result of any failure of the Contractor or its subcontractors to be in compliance with this Act.

4. Project Administration Requirements

The Contractor shall comply with the following Project Administration requirements:

A. The Contractor is responsible for its construction contract administration of the Project. CTDOT, City, and NHPA reserve the right to review all services provided by Contractor and to

inspect all work performed by Construction Contractors as to confirm following the applicable construction standards.

B. The Contractor shall administer the Project as required in accordance with the following requirements:

(1). The following provisions of the State of Connecticut, Department of Transportation, Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 819, which each the Contractor or Subcontractor, as applicable, will incorporate into its agreements with, and ensure compliance by, its Contractors and Subcontractors of any tier.

1. Section 1.20-1.03.04 Requirements of Performance Contract Bond and Payment Bond,
2. Section 1.20-1.05.03 Conformity with Plans and Specifications,
3. Section 1.20-1.05.10 Inspection,
4. Section 1.20-1.05.11 Removal of Defective or Unauthorized Work,
5. Section 1.20-1.05.12 Payrolls to extent required to ensure compliance with prevailing wage requirements,
6. Section 1.20-1.05.13 Examining and Copying Contractor's Records,
7. Section 1.20-1.05.14 Termination for Convenience, so the Parties are able to terminate any contract if determined to be in the best interest of the Project,
8. Section 1.20-1.06.08 Warranties, Guarantee and Instruction Sheets,
9. Sections 1.20-1.07.1 through 1.07.18 inclusive, Legal Relations and Responsibilities,
10. Section 1.20-1.10 Environmental Compliance, and
11. Certain Sections of 1.20 General Clauses for Facility Construction to be provided within the Construction Documents.
12. The version of the Standard Specifications in effect at the date of completion of the design phase for the Project is the version that must be followed and complied with for the construction phase.

(2). The Contractor shall submit to CTDOT, City, and NHPA progress reports for the Project no less frequently than every calendar month in the form and format as may be required by CTDOT, City and NHPA.

(3). The Contractor shall submit invoices to NHPA on a monthly basis or as a result of substantial progress as reported in the Agreement. Invoices shall be submitted electronically on the proper form with all required supporting documentation including progress reports and any supporting documentation requested by CTDOT, City, and NHPA to facilitate payment and/or any appropriate reimbursements. CTDOT, City, and NHPA shall not reimburse the Contractor for any non-eligible expenditures or expenditures incurred prior to execution of this Agreement and NHPA's issuance of written authorization to proceed. Payments to the Contractor shall be made by NHPA, once funds are received by NHPA, pursuant to the applicable procedures of the LOFA and Capital Funding Agreement, upon approval of payment requisitions certified by a principal

of the Contractor submitted not more often than once a month, unless otherwise allowed by NHPA at its sole discretion.

(4). The Contractor must notify CTDOT, City, and NHPA in writing of the completion of the Project and provide a final project Progress Report and final total expenditure information.

(5). No funds shall be expended by the Contractor after the expiration of the Term of this Agreement. Any Funds expended after the end date of the Grant shall be considered ineligible and must be returned to CTDOT, City, and NHPA.

C. The Project shall be constructed in accordance with all applicable State of Connecticut and federal laws and regulations and the applicable requirements of the LOFA, the Standard Specifications, and the State of Connecticut Requirements. The Contractor shall impose, and require its Subcontractors and other parties connected to the Agreement to impose, these requirements on all parties it contracts with in performing the Project.

TECHNICAL SPECIFICATIONS

DIVISION 1

GENERAL REQUIREMENTS

SECTION 01 01 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

1.02 INTENT OF PLANS AND SPECIFICATIONS

- A. The intent of the Plans and Specifications is to describe The Work which the Contractor undertakes to do, in full compliance with the Contract, and it is understood that the Contractor will furnish, unless otherwise provided in the Contract, all materials, machinery, equipment, tools, supplies, transportation, labor, and all other incidentals necessary to the satisfactory prosecution and completion of the Work. The Plans and Specifications are complementary, and what is called for by either is as binding as if called for by both.
- B. The General Conditions and Special Conditions shall control where in conflict with the Standard Specifications. However, such portions of the Standard Specifications not in conflict or not rendered meaningless by the General Conditions or Special Conditions shall remain in full force and effect and be binding on the parties hereto.
- C. In the event the Contractor discovers any error or discrepancy in the Contract Documents, he shall immediately call upon the Engineer for his decision. The Engineer shall then make such corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the Specifications, General Conditions and Special Conditions, Plans and other Contract Documents, as construed by him and his decision shall be final.

1.03 SUMMARY OF WORK

- A. The following items shall be considered as the Base Bid:

Proposal Item 1 – General Provisions:

- A. General Mobilization/Demobilization/Miscellaneous Coordination.

This line item shall consists of all labor, materials, tools and equipment required for setting-up general plant, storage/staging areas and facilities required to facilitate construction or as otherwise required by applicable Federal, State and Local laws; and the general mobilization of equipment required for the completion of the work as shown within the Bid Documents and all expenses for de-mobilization off the site upon completion of all work as shown within the

Bid Documents. It will be the contractor's responsibility to obtain all necessary permits to perform the work.

Electricity (power) and water required for the completion of the work shall be furnished by the Owner at existing fixtures or outlets (The Owner will not provide any temporary pipes, cables, etc.). If the capacity of existing utilities is insufficient for the contractor's use, the Contractor shall be responsible for supplementing this capacity as required at no cost to the Owner. The contractor shall provide temporary lighting within designated work areas, as required.

The Contractor shall furnish, install, maintain, relocate and remove all signs, barricades, cones, warning lights, and other safety control devices and temporary signage required for the proper execution of the project. The Engineer and the Owner shall review the safety control device placement before work begins and prior to the beginning of work on any subsequent construction stages. Any deficiencies in the location or arrangement of devices shall be corrected by the contractor before starting work or as the work progresses towards completion. **Contractor shall note that while this Bid Item 1.A shall include the procurement and installation of all applicable safety & traffic control devices (i.e. barricades, etc.) as well as the coordination and installation of temporary signage, the material procurement of the temporary signage shall be included in Proposal Item 6. Work associated with both the procurement and installation of Project Signs (reference Special Conditions 336) is included in its totality within this Proposal Item 1.A.**

The Contractor shall provide and maintain adequate protection of all preexisting architectural, structural, mechanical, electrical, plumbing components and/or features within the confines of in the work areas that are to remain in-place. The work shall include the dismantling of any preexisting architectural, structural, mechanical, electrical, plumbing components and/or features within the confines of in the work areas (such as the temporary moving/relocation of tenant furniture, equipment, etc.) which might be required in order to perform the work specified. The temporarily dismantled installations shall be reinstalled as soon as possible to a condition equal to or better than the condition existing prior to the commencement of construction.

Work shall also include the provision of an effective ventilation system to safely remove all dust and hazardous fumes generated from demolition, any surface treatment applications, or other work. Contractor shall be required to remove any and all loose/spalled overhead or vertical concrete from the structure (concrete framing elements or deck) prior to the start of any demolition activities to prevent any deteriorated concrete from being jarred loose in an uncontrolled fashion. Contractor shall be required to coordinate all aspects of his work with NHPA management and operations staff as well as facility security personnel throughout construction.

The contractor shall submit to the Owner/Engineer documentation of all pre-existing non-functioning electrical/mechanical systems within the entire work area. This documentation should be based on the contractor's condition survey performed immediately prior to the scheduled mobilization. The contractor shall not start the mobilization until the Owner approves of this submittal.

This work consists of items not otherwise specifically indicated or shown on the plans but which are ancillary to the specified scope of work being performed, or part of the overall Scope of Work or otherwise not noted or assigned to other Proposal Items.

Contractor shall note that payment for this item shall be distributed in proportion to the total amount of all contract work complete in place unless otherwise approved in writing by NHPA.

B. Provision of Bonds, Permits, and Insurance.

Work shall consist of the costs associated with the procurement of all bonds, permits, and insurance necessary for this project. Provision of bonds shall include, but not be limited to, Labor & Material Bonds, Performance Bonds, etc. It shall be the contractor's sole responsibility to obtain all necessary permits to perform the work, including, but not limited to, Building, Electrical, Mechanical, Plumbing, and Street Obstruction permits, if required. Insurance requirements are described in General Conditions Section 111 and Special Conditions Section 313.

Proposal Item 2 – Work related to the Air Rights Garage, Crown Street Garage, Temple Street Garage, Temple Medical Garage, 270 State Street Garage and Granite Square Garage:

Work shall consist of the replacement the existing parking access & revenue control equipment with the new equipment, as designated per the specified inventory, as well as the provision and integration of the equipment with the system and cloud-based management software, with applicable support and service all as specified, all in accordance with the project requirements, along with all other work required for the satisfactory performance of this work item

Contractor shall note that due to functional requirements, the nested parking areas on Levels 4, 6 & 8 of the Air Rights Parking Garage is separated from the equipment for the main entrances and exits on Levels 1 & 2, as noted. In addition, while the equipment on levels 4, 6 & 8 will be replaced as specified, work shall include the installation of additional equipment to more fully and accurately count the vehicles into and out of the nested parking on levels 4, 6 & 8 as specified.

Due to flooding, the equipment at the exit to Dr. Rev. Martin Luther King Blvd, at the Temple Street Garage, is exposed to frequent damage. Therefore, work shall include the unique mounting of the equipment, at the exit, onto a hydraulic lift system that would raise the equipment above the water level, when flooding occurs. The system shall be connected with a high water sensor so that the equipment is raised automatically. NHPA is open to alternative options as may be proposed.

In addition to the exit to Dr. Rev. Martin Luther King Blvd, at the Temple Street Garage, Contractor shall note that certain electrical repairs are required at the entrance from Crown Street, consisting of replacement of conduit and re-routing it down through the floor slab, along the soffit, and up again as required; Contractor shall coordinate with the Engineer accordingly.

Contractor shall note that work regarding Granite Square Parking Garage shall involve the installation of new equipment at the main entrance/exit on the first level (street level). Although there is an existing island with a booth, no equipment is currently located at the island; therefore, Work shall include the installation of new infrastructure accordingly.

- A. Work related to the Air Rights Parking Garage:
 - 1. Work regarding Levels 1 & 2
 - 2. Work regarding Levels 4, 6 & 8
- B. Work related to the Crown Street Parking Garage:
- C. Work related to the Temple Street Parking Garage:
- D. Work related to the Temple Medical Parking Garage:
- E. Work related to the 270 State Parking Garage:
- F. Work related to the Granite Square Parking Garage:

Proposal Item 3 – Work related to the Union Station Parking Garage:

Work shall consist of the replacement the existing parking access & revenue control equipment with the new equipment, as designated per the specified inventory, as well as the provision and integration of the equipment with the system and cloud-based management software, with applicable support and service all as specified, all in accordance with the project requirements, along with all other work required for the satisfactory performance of this work item.

Proposal Item 4 – Work related to the Under Air Rights Surface Lot, Elm/Orange Surface Lot, State Wall Surface Lot, State Fair Surface Lot, State Trumbull Surface Lot, State Pulaski Surface Lot, and Whalley Blake Surface Lot:

Work shall consist of the replacement the existing parking access & revenue control equipment with the new equipment, as designated per the specified inventory, as well as the provision and integration of the equipment with the system and cloud-based management software, with applicable support and service all as specified, all in accordance with the project requirements, along with all other work required for the satisfactory performance of this work item

Contrary to existing conditions, the State Wall Surface Lot, which currently does not have gates and related equipment shall receive new equipment. Work shall include the verification of conditions and the placement of the new equipment, followed by installation of the new concrete island and bollards, trenching and installation of all power and communication infrastructure, repair to the asphalt pavement, followed by installation of the equipment.

Therefore, prior to start of work and as part of its submittal requirements, Contactor shall provide shop drawings depicting the intended routing of the controls, conduit and wiring infrastructure, as well as placement of new island and all equipment, for review by the Owner/Engineer; work shall not be started until an accepted set of drawings are returned to the Contractor.

Regarding the State Wall Lot, Proposer shall note that an AT&T Duct Bank is located underground within the vicinity of the new equipment. Proposer shall take extreme caution in identifying and locating this bank prior to start of work; this duct bank shall not be disturbed nor damaged. Proposer shall further note that, due to the installation of the new island and equipment, Work shall include modifications of the parking stall and traffic markings, necessitating the re-striping and re-application of all markings for the State Wall Lot; Contractor shall verify all markings and adjustments prior to start of work and shall

remove all conflicting markings accordingly. Acceptable marking paint shall be Setfast Low VOC Acrylic Traffic Marking Paint (2 coats minimum), by Sherwin Williams or approved equal.

Contractor shall further note that the ungated lots will use ALPR and multi-space meters rather than the PARCS equipment used in the gated lots and garages. The Proposer shall be fully responsible for integrating the ungated lot LPR with the PARCS system. NHPA also desires to permit transient parking payment in the ungated lots through the appropriate Apps.

- A. Work related to the Under Air Rights Surface Lot:
- B. Work related to the Elm/Orange Surface Lot:
- C. Work related to the State Wall Surface Lot:
 - 1. All specified work except as noted:
 - 2. Re-application of all Traffic Markings, with specified adjustments
- D. Work related to the State Fair Surface Lot:
- E. Work related to the State Trumbull Surface Lot:
- F. Work related to the State Pulaski Surface Lot:
- G. Work related to the Whalley Blake Surface Lot:

Proposal Item 5 – Refurbishment of Booths

Work shall consist of the repair and/or refurbishment of the booths at the various locations, all as detailed in the specifications, along with all other work required for the satisfactory performance of this work item. Contractor shall note that work shall include cleaning, miscellaneous repair of the exterior surfaces, re-painting of the exterior surfaces, cleaning of the glass with replacement of glass as required, adjustment and repair of the doors and windows including replacement as required, replacement of the roofing systems, re-finishing of the interior surfaces, such as but not limited to countertops, shelves, etc., replacement of light fixtures, replacement of HVAC equipment, as well as all other materials and equipment related to the booths so as to completely refurbish and/or modernize the booths. Work shall also consist of all electrical work and coordination to support the refurbishment and/or repairs/replacement; all as shown on the drawings, in accordance with the specifications, and/or otherwise directed by the Engineer, along with all other work required for the satisfactory performance of this work item.

Contractor shall note that while the booths on levels 1 & 2 of the Air Rights Parking Garage are to be refurbished as part of this Scope, the booth on level 4 is excluded from the Scope. Contractor shall further note that the booth at the Granite Square Garage does not currently have ductwork to the exterior perimeter; Work shall therefore include, in addition to the specified HVAC improvements, the installation of new ductwork as specified, shown on the drawings and as directed by the Engineer.

Contractor shall note that the existing booth at the Under Air Rights Surface Lot shall be replaced with a new booth, as designated on the Drawings. Work shall include the removal and disposal of the existing booth, followed by the placement and installation of the new booth, including the installation of a new concrete ADA-compliant ramp as shown, along with all other work required for the satisfactory performance of this work item. Work shall also include verification of the placement

of the ramp prior to start of work, as well as all coordination work required for the installation and connection of the various electrical, mechanical, and communication components designated on the Drawings and/or as directed by the Owner/Engineer.

Except as noted above regarding Granite Square Garage, Contractor shall note that the existing ductwork serving the various booths is in varying condition per location. Therefore, Work shall include the Contractor coordinating with applicable parties to properly identify the scope of the work required, following a visual survey of the ductwork to identify all potential repairs, followed by the Contractor providing a written proposal for the required repairs for review and approval. Upon approval of Contractor's proposal by the owner; payment for this item of work shall be made on a time and material basis at cost plus 15% verified by appropriate backup documentation, or alternately by acceptable lump sum as approved by the Owner. If the work is performed by a subcontractor, the General Contractor will be allowed to add an additional 5% to the time and material costs of the subcontractor.

- A. Work related to the Air Rights Parking Garage:
- B. Work related to the Crown Street Parking Garage:
- C. Work related to the Temple Street Parking Garage:
- D. Work related to the Temple Medical Parking Garage:
- E. Work related to the 270 State Parking Garage:
- F. Work related to the Granite Square Parking Garage:
- G. Work related to the Union Station Parking Garage:
- H. Work related to the Under Air Rights Surface Lot
- I. Allowance for Repairs to the Ductwork

Proposal Item 6 – Provision of Temporary Traffic Control Signage and Related Graphics:

Work shall consist of the provision of any and all temporary signage and graphics for use during construction, for Work impacting the interiors of the Parking Garages. All temporary signage shall be of a professional nature, as approved by Owner prior to procurement and prior to its installation, and shall consist of specified materials, along with all other work required for the satisfactory performance of this work item. All temporary signage required for the successful execution of the repair work shall become the property of NHPA unless otherwise approved.

Contractor shall note that while this Allowance shall solely pertain to the procurement of the applicable temporary signage, all required coordination with applicable parties to organize the temporary work areas both inside and outside of the facility, followed by the proposing and installation of associated temporary signage, along with the procurement and provision of temporary traffic control devices (i.e. barricades, etc.) shall be included in Bid Item 1.A, General Mobilization/Demobilization.

Proposal Item 7 – Security Camera and Door Control System Allowance.

Work shall consist of designing and installing security cameras and door control systems for all pedestrian entrances at all garages, ensuring seamless integration with the PARCS system for enhanced security and access control.

Proposal Item 8 – Miscellaneous Contingency Allowance.

This contingency allowance shall pertain to any and all necessary work that may arise due to unforeseen conditions not covered by the Proposal Documents and which may need to be performed at the direction of the Owner/Engineer. Work shall include the Contractor coordinating with applicable parties to properly identify the scope of the additional work required, followed by the Contractor providing a written proposal for the required repairs for review and approval.

Upon approval of Contractor's proposal by the owner; payment for this item of work shall be made on a time and material basis at cost plus 15% verified by appropriate backup documentation, or alternately by acceptable lump sum as approved by the Owner. If the work is performed by a subcontractor, the General Contractor will be allowed to add an additional 5% to the time and material costs of the subcontractor.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 01 00

SECTION 01 02 60

UNIT PRICES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY:

- A. This Section specifies administrative and procedural requirements for unit prices.
 - 1. A unit price is an amount proposed by Bidders and stated on the Bid Form as a price per unit of measurement for materials and/or services that will be added to or deducted from the Contract Sum by Change Order in the event the estimated quantities of Work required by the Contract Documents are increased or decreased.
 - 2. Unit prices include all necessary labor, materials, equipment and incidentals, overhead, profit and applicable taxes.
 - 3. Refer to individual Specification Sections for construction activities requiring the establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- B. Schedule: A "Unit Price Schedule" is included at the end of this Section; reference Part 3.01. Specification Sections referenced in the Schedule contain requirements for materials and methods described under each unit price.
 - 1. The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this Work measured by an independent surveyor acceptable to the Contractor at the Owner's expense.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

3.01 UNIT PRICE SCHEDULE

- A. Unit prices for all items are as shown in the Bid Forms shall be considered an integral part of this Section.

3.02 PAYMENT FOR EXTRA WORK

- A. Extra work which results from any of the changes as specified and for which no unit price is provided in the Contract, shall not be started until receipt of a written authorization or work order from the Owner, which authorization shall state the items of work to be performed and the method of payment for each item. The Contractor shall not be entitled to payment for work performed without such authorization.
- B. If it is practicable to pay for Extra Work on the unit price, a fair and equitable sum shall be fixed by agreement of the parties and shown in an Extra Work Order Agreement. Work to be performed directly by the Contractor should be submitted showing a detailed breakdown of labor and material costs to which a fifteen percent markup should be added for overhead and profit.
- C. Work to be performed by the subcontractor should be submitted showing a detailed breakdown of labor and materials by the subcontractor to which a five percent markup should be added by the Contractor for overhead and profit.
- D. When the Owner deems it impracticable to handle any Extra Work on the unit price, or if agreement of the parties cannot be reached, the work may be ordered done and paid for on a Force Account basis, as follows:
 - 1. Labor: The Contractor will be paid the actual amount of wages for all labor and foremen who are actually engaged in such work, to which cost shall be added fifteen percent of the sum of such wages. A foreman shall not be used when there are less than three laborers employed, except with the written consent of the Engineer.
 - 2. Welfare and Pension Fund: The Contractor will receive the actual additional amount of contributions paid for regular and uniform health and welfare benefits, pension fund benefits or other benefits, to which zero percent shall be added, when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the class of labor employed on the Work.

3. Insurance and Tax: The Contractor will receive the actual cost or increase in cost of Contractor's Public Liability and Property Damage insurance, Workmen's Compensation tax, and Social Security tax required for Force Account work. The Contractor shall furnish satisfactory evidence of the cost or rates paid for such insurance and tax.
4. Materials: The Contractor will receive the actual cost for all materials, including freight charges as shown by the original paid invoices, which become an integral part of the finished work, to which shall be added 15 percent of the sum thereof.

The Contractor will be reimbursed for any materials used in the construction of such work as sheeting, false-work, form lumber, etc., which are not an integral part of the finished work. The amount of reimbursement shall be agreed upon in writing before such work is begun, and no percent shall be added. The salvage value of such materials shall be taken into consideration in the reimbursement agreed upon.

5. Equipment: For any machinery or special equipment (other than small tools), the use of which has been authorized by the Engineer, the Contractor will be paid as following:
 - a. For his own equipment, he will be paid by the monthly rate in accordance with the latest edition of Means Construction Cost Data.
 - b. For rental equipment, he will be paid for the actual invoice amount as shown by the original paid invoices.

The equipment shall be of a type and size reasonably required to complete the Extra Work. Compensation will not be allowed for transportation to or from the Work or for the time required for setting up and removing the equipment from the Work or for equipment of a type, size or condition unsuitable for the Work.

3.03 CANCELED ITEMS

- A. It shall be in the sole judgment and sole discretion of the Engineer or its representatives to cancel or alter any or all portions of the Contract due to circumstances either unknown at the time of bidding or arising after the Contract was entered into. Should such actions result in elimination or non-completion of any portion of the Contract, payment shall be made as follows:

1. For the canceled work completed by the Contractor, payment shall be made to the Contractor for the actual number of units or items completed at the Contract unit prices. For canceled work partially completed by the Contractor, payment shall be made to the Contractor for the partially completed units or items as specified in Payment for Extra Work.
2. For materials obtained by the Contractor for the unfinished (uncompleted) portions of the canceled work, that have been inspected, tested and accepted by the Engineer, and that have not been incorporated in the canceled work, payment shall be made to the Contractor for the actual costs for all such materials, including freight charges, as shown by the original paid invoices, to which shall be added 10 percent of the sums thereof. The materials, when so paid for by the Owner, shall become the property of the Owner.

3.04 PARTIAL PAYMENTS

- A. The Engineer shall review the Contractor's pay request for materials in-place and completed, the amount of work performed, and the value thereof, at the Contract Unit Prices. From the amount so determined there shall be deducted five percent to be retained until after the completion of the entire work to the satisfaction of the Engineer, and the balance certified to the Owner for payment. No payment shall be made for stored materials.
- B. If stored matter is lost or damaged prior to incorporation in the Work, the materials shall be replaced or satisfactory repaired at the Contractor's expense. The Contractor shall pay and be responsible for cost of storage, if any, of said materials.

3.05 ADJUSTMENT OF UNIT PRICES BASED ON ACTUAL QUANTITIES PERFORMED

- A. For unit price bid items, the quantities as listed in the schedule of bid items are estimates only. The Contractor will be required to complete the work specified in accordance with the Contract and at the quoted unit prices, whether quantities greater or less than the estimated amounts are involved.

END OF SECTION 01 02 60

SECTION 01 02 70

APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.01 Related Documents

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 Summary

This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.

1.03 Application for Payment

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect/Engineer and paid for by the Owner.
 - 1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- B. Payment Application Times: Each progress payment date is as indicated in the Agreement. The period of construction Work covered by each Application or Payment is the period indicated in the Agreement.
- C. Payment Application Forms: Use AIA Document G 702 and Continuation Sheets G 703 as the form for Application for Payment. Contractor shall note that although AIA forms are being utilized for document format, AIA Contract Terms do not apply.
- D. Application Preparation: Complete every entry on the form, inclusive of notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.
 - 1. Entries shall match data on the Bid Form's Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.

2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
 3. Quantity of “Stored Materials” shall not be submitted for payment. **Contractor shall only be allowed to apply for payment for “Completed Work.”**
 4. **Contractor shall include an updated schedule with each payment requisition.**
- E. Transmittal: Submit three (3) executed copies of each Application for Payment to the Engineer/Architect by means ensuring receipt within 24 hours; one copy shall be complete, including waivers of lien and similar attachments, when required.
1. Submit one (1) draft copy of each Application to the Engineer/Architect and one (1) to the Owner for purposes of review prior to executing the official submission.
 2. Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Engineer/Architect.
- F. Waivers of Mechanics Lien: With each Application for Payment submit waivers of mechanics liens from subcontractors or sub-subcontractors and suppliers for the construction period covered by the current application.
1. Submit partial waivers on each item for the amount requested, prior to deduction for retainage, on each item.
 2. When an application shows completion of an item, submit final or full waivers.
 3. The Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Delays: Submit each Application for Payment with the Contractor's waiver of mechanics lien for the period of construction covered by the application.
 - a. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of Work covered by the application who could lawfully be entitled to a lien.

5. Waiver Forms: Submit waivers of lien on forms, and executed in a manner, acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following in addition to requirements of the General and Special Conditions:
1. List of subcontractors
 2. List of principal suppliers and fabricators
 3. Schedule of Values to match Bid Form
 4. Contractor's Construction Schedule (preliminary if not final)
 5. Schedule of principal products
 6. Schedule of unit prices
 7. Schedule of Submittals (preliminary if not final)
 8. List of Contractor's staff assignments
 9. List of Contractor's principal consultants
 10. Copies of building permits
 11. Copies of authorizations and licenses from governing authorities for performance of the Work
 12. Initial progress report
 13. Report of pre-construction meeting
 14. Certificates of insurance and insurance policies
 15. Performance and payment bonds (if required)
 16. Data needed to acquire Owner's insurance
 17. Initial settlement survey and damage report, if required
- H. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Administrative actions and submittals that shall proceed or coincide with this application include:
1. Occupancy permits and similar approvals
 2. Warranties (guarantees)
 3. Maintenance Agreements
 3. Test/adjust/balance records
 4. Maintenance Instructions
 5. Meter readings
 6. Start-up performance reports
 7. Change Over information related to Owner's occupancy, use, operation and maintenance
 8. Final Cleaning

9. Application for reduction of retainage, and consent of surety
 10. Advice on shifting insurance coverages
 11. Final progress photographs
 12. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion
 13. Requirements of the General and Special Conditions
- J. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final payment Application for Payment include the following:
1. Project Completion closeout requirements
 2. Completion of items specified for completion after Substantial Completion
 3. Transmittal of required Project construction records to Owner
 4. Proof that taxes, fees and similar obligations have been paid
 5. Removal of temporary facilities and services
 6. Removal of surplus materials, rubbish and similar elements
 7. Requirements of the General and Special Conditions

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 02 70

SECTION 01 03 50

MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, General and Supplementary Conditions and other Division I Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing contract modifications. Refer to General Conditions for additional information.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division I Section 01026 "Unit Prices"
 - 2. Division I Section 01027 "Applications for Payment" for administrative procedures Governing Applications for Payment
 - 3. Division I Section 01300 "Submittals" for requirements for the Construction Schedule
 - 4. Division I Section 01631 "Product Substitutions" for administrative procedures for handling requests for substitutions made after award of the Contract

1.03 CHANGE ORDER PROPOSAL REQUESTS

- A. Owner Initiated Proposal Requests: The Engineer/Architect will issue a detailed description of proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal requests issued are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.

2. Submit an estimate of cost necessary to execute the change to the Engineer/Architect for the Owner's review.
 - a. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.
- B. Contractor Initiated Proposals: When latent or unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Engineer/Architect.
 1. Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
 2. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 3. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
 4. Comply with requirements in Section 01631, Product Substitutions, if the proposed change requires an equal or substitution of one product or system for a product or system specified.
- C. Proposal Request Form: Use "Change Order Request" proposal form as required by Owner for Change Order Proposal Requests.

1.04 CONSTRUCTION CHANGE DIRECTIVE

- A. If the Owner and the Contractor disagree on the terms of a Proposal Request, the Engineer/Architect may issue a Construction Change Directive on a "Construction Change Directive" form as required by the Owner. The Construction Change Directive instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. The Construction Change Directive contains a complete description of the change in the Work. It also designates the method to be followed to determine change in the Contract Sum or Contract Time.
- B. Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
 2. The final value shall be negotiated based on the supporting data to determine the value of the work.

1.05 CHANGE ORDER PROCEDURES

- A. With the Owner's approval of a Proposal Request, the Engineer/Architect will issue a Change Order for signatures of the Engineer/Architect, Owner and the Contractor on a "Change Order" form as required by the Owner.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 03 50

SECTION 01 04 00

PROJECT COORDINATION

PART 1 - GENERAL

1.01 Related Documents

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 Summary

- A. This Section specifies administrative and supervisory requirements necessary for project coordination including, but not necessarily limited to:
 - 1. Coordination
 - 2. Administrative and supervisory personnel
 - 3. General installation provisions
 - 4. Cleaning and protection
- B. Progress meetings, coordination meetings and pre-installation conferences are to be determined in consultation with the Owner.
- C. Requirements for the Contractor's Construction Schedule are included in Section "Submittals".

1.03 Coordination

- A. Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.
 - 1. Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.
 - 2. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

3. Make adequate provisions to accommodate items scheduled for later installation.
- B. When necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
1. Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of schedules
 2. Installation and removal of temporary facilities
 3. Delivery and processing of submittals
 4. Progress meetings
 5. Project close out activities
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work. Refer to other sections for disposition of salvaged materials that are designated as Owner's property.

1.04 Submittals

- A. Coordination Drawings: Prepare and submit coordination Drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.
1. Show the interrelationship of components shown on separate Shop Drawings.
 2. Indicate required installation sequences.
 3. Comply with requirements contained in Section "Submittals".

- B. Within 15 calendar days of the Contractor's receipt of the official Notice to Proceed, the Contractor shall submit a listing of principal staff assignments, including the Superintendent and other personnel in attendance at the site. Individuals should be identified, particularly key personnel. The listing of staff should include a brief description of individual duties and responsibilities; addresses, telephone numbers, pager numbers and portable telephone numbers as appropriate so that key personnel can be reached at all times.
 - 1. Post copies of the list in the project meeting room, the temporary field office, and each temporary telephone.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 General Installation Provisions

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Manufacturer's Instructions: Comply with manufacturer's written installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
- C. Inspect materials or equipment immediately upon delivery and then again prior to installation. Reject damaged and defective items.
- D. Provide attachment and connection devices and methods necessary for securing work. Secure Work true to line and level. Allow for expansion and building movement.
- E. Provide uniform joint widths in exposed Work. Arrange joints in exposed work to obtain the best visual effect. Refer questionable choices to the Engineer for final decision.
- F. Measurements and dimensions should all be rechecked before starting each and every installation.

- G. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
- H. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for the purpose of inspection.
- I. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Engineer for final decision.

3.02 Cleaning and Protection

- A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 - 1. Excessive static or dynamic loading
 - 2. Excessively high or low temperatures
 - 3. Air contamination or pollution
 - 4. Water or ice
 - 5. Solvents and chemicals
 - 6. Puncture and abrasion
 - 7. Heavy traffic
 - 8. Soiling, staining and corrosion
 - 9. Bacteria
 - 10. Combustion
 - 11. Electrical current
 - 12. Unusual wear or other misuse
 - 13. Contact between incompatible materials
 - 14. Destructive testing

15. Misalignment
16. Excessive weathering and unprotected storage
17. Improper shipping and handling
18. Theft and vandalism

END OF SECTION 01 04 00

SECTION 01 04 50

CUTTING AND PATCHING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY:

- A. This Section specifies administrative and procedural requirements for cutting and patching.
- B. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
 - 1. Requirements of this Section apply to existing plumbing and electrical installations.
- C. Demolition of selected portions of the building for alterations is included in Section "Selective Demolition."

1.03 SUBMITTALS:

- A. Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:
 - 1. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
 - 2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 - 3. List products to be used and firms or entities that will perform the Work.
 - 4. Indicate dates when cutting and patching is to be performed.

5. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
6. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.
7. Approval by the Consultant to proceed with cutting and patching does not waive the Consultant's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

1.04 QUALITY ASSURANCE:

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.
 1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. Foundation construction
 - b. Bearing and retaining walls
 - c. Structural concrete
 - d. Structural steel
 - e. Lintels
 - f. Timber and primary wood framing
 - g. Structural decking
 - h. Stair systems
 - i. Miscellaneous structural metals
 - j. Exterior curtain wall construction
 - k. Equipment supports
 - l. Piping, ductwork, vessels and equipment
- B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.
 1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
 - a. Shoring, bracing, and sheeting
 - b. Primary operational systems and equipment
 - c. Air or smoke barriers
 - d. Water, moisture, or vapor barriers

- e. Membranes and flashings
- f. Fire protection systems
- g. Noise and vibration control elements and systems
- h. Control systems
- i. Communication systems
- j. Conveying systems
- k. Electrical wiring systems

C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Consultant's opinion, reduce the building's aesthetic qualities, or results in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

1. If possible retain the original installer or fabricator to cut and patch the following categories of exposed Work, or if it is not possible to engage the original installer or fabricator, engage another recognized experienced and specialized firm:

- a. Processed concrete finishes
- b. Stonework and stone masonry
- c. Ornamental metal
- d. Matched-veneer woodwork
- e. Preformed metal panels
- f. Window wall system
- g. Stucco and ornamental plaster
- h. Acoustical ceilings
- i. Terrazzo
- j. Finished wood flooring
- k. Fluid-applied flooring
- l. Carpeting
- m. Aggregate wall coating
- n. Wall covering
- o. Swimming pool finishes
- p. HVAC enclosures, cabinets or covers

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 – EXECUTION

3.01 INSPECTION:

- A. Before cutting existing surfaces examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.
 - 1. Before proceeding, meet at the site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.02 PREPARATION:

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

3.03 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer and comply with the original installer's recommendations.
1. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 3. Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill.
 4. Comply with requirements of applicable Sections of Division-2 where cutting and patching requires excavating and backfilling.
 5. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 3. Where removal of walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even

surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.

- a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch, after the patched area has received primer and second coat and in accordance with the manufacturer's written recommendations.
4. Patch, repair or re-hang existing ceilings as necessary to provide an even plane surface of uniform appearance.

3.04 CLEANING

- A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION 01 04 50

SECTION 01 09 50

REFERENCE STANDARDS AND DEFINITIONS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. Indicated: The term "indicated" refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limitation on location is intended.
- C. Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Consultant," "requested by the Consultant," and similar phrases.
- D. Approve: The term "approved," where used in conjunction with the Consultant's action on the Contractor's submittals, applications, and requests, is limited to the Consultant's duties and responsibilities as stated in the Conditions of the Contract.
- E. Regulation: The term "Regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."
- G. Install: The term "install" is used to describe operations at Project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations."
- H. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

- I. Installer: An "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
1. The term "experienced," when used with the term "Installer," means having a minimum of five previous projects similar in size and scope to this Project, being familiar with the special requirements indicated, and having complied with requirements of the authority having jurisdiction.
 2. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter". It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.
 3. Assignment of Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities, and assignments are requirements over which the Contractor has no choice or option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the Contractor.
 - a. This requirement shall not be interpreted to conflict with enforcement of building codes and similar regulations governing the Work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.
- J. Project Site is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
- K. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.03 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 16-Division format and MASTER FORMAT numbering system.
- B. Specification Content: This Specification uses certain conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
 - 1. Abbreviated Language: Language used in Specifications and other Contract Documents is the abbreviated type. Words and meanings shall be interpreted as appropriate. Words that are implied, but not stated shall be interpolated as the sense required. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and the context of the Contract Documents so indicates.
 - 2. Imperative and streamlined language is used generally in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled indirectly by the Contractor, or by others when so noted.
 - a. The words "shall be" shall be included by inference wherever a colon (:) is used within a sentence or phrase.

1.04 INDUSTRY STANDARDS

- A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with the standard in effect as of the date of the Contract Documents.
- C. Conflicting Requirements: Where compliance with two or more standards is specified, and the standards may establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different, but apparently equal, and uncertainties to the Consultant for a decision before proceeding.

1. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum, as appropriate for the context of the requirements. Refer uncertainties to the Consultant for a decision before proceeding.
- D. **Copies of Standards:** Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.
- E. **Abbreviations and Names:** Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.
- F. **Abbreviations and Names:** Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations, as referenced in Contract Documents, are defined to mean the associated names. Names and addresses are subject to change and are believed to be, but are not assured to be, accurate and up to date as of date of Contract Documents.

AA Aluminum Association
900 19th St., NW, Suite 300
Washington, DC 20006 (202) 862-5100

AASHTO Amer. Assoc. of State Highway and Transportation Officials
444 North Capitol St., Suite 225
Washington, DC 20001 (202) 624-5800

ACI American Concrete Institute
P.O. Box 19150
Detroit, MI 48219 (313) 532-2600

ACIL American Council of Independent Laboratories
1725 K St., NW
Washington, DC 20006 (202) 887-5872

AI Asphalt Institute
P.O. Box 14052
Lexington, KY 40512-4052 (606) 288-4960

AIA American Institute of Architects
1735 New York Ave., NW
Washington, DC 20006 (202) 626-7300

APA American Plywood Assoc.
P.O. Box 11700
Tacoma, WA 98411 (206) 565-6600

ARMA Asphalt Roofing Manufacturers Assoc.
6288 Montrose Rd.
Rockville, MD 20852 (301) 231-9050

ASC Adhesive and Sealant Council
1627 K Street, NW, Suite 1000
Washington, DC 20006 (202) 452-1500

ASPE American Society of Plumbing Engineers
3617 Thousand Oaks Blvd., Suite 210
Westlake, CA 91362 (805) 495-7120

ASTM American Society for Testing and Materials
1916 Race St.
Philadelphia, PA 19103 (215) 299-5400

AWS American Welding Society
550 LeJeune Road, NW
P.O. Box 351040
Miami, FL 33135 (305) 443-9353

BANC Brick Association of North Carolina
P.O. Box 13290
Greensboro, NC 27415-3290 (919) 273-5566

BHMA Builders' Hardware Manufacturers Assoc.
355 Lexington Ave., 17th Floor
New York, NY 10017 (212) 661-4261

BIA Brick Institute of America
11490 Commerce Park Drive, Suite 300
Reston, VA 22091 (703) 620-0010

CRSI Concrete Reinforcing Steel Institute
933 Plum Grove Rd.
Schaumburg, IL 60173 (312) 517-1200

EJMA Expansion Joint Manufacturers Assoc.
25 N. Broadway
Tarrytown, NY 10591 (914) 332-0040

HPMA Hardwood Plywood Manufacturers Assoc.
1825 Michael Farraday Drive
P.O. Box 2789
Reston, VA 22090 (703) 435-2900

IEEE Institute of Electrical and Electronic Engineers
345 E. 47th St.
New York, NY 10017 (212) 705-7900

NAPA National Asphalt Pavement Assoc.
Calvert Building, Suite 620
6811 Kenilworth Ave.
Riverdale, MD 20737 (301) 779-4880

NCMA National Concrete Masonry Assoc.
P.O. Box 781
Herndon, VA 22070 (703) 435-4900

NEC National Electric Code (from NFPA)

NECA National Electrical Contractors Assoc.
7315 Wisconsin Ave.
Bethesda, MD 20814 (301) 657-3110

- G. Federal Government Agencies: Names and titles of federal government standard or Specification producing agencies are often abbreviated. The following acronyms or abbreviations referenced in the Contract Documents indicate names of standard or Specification producing agencies of the federal government. Names and addresses are subject to change but are believed to be, but are not assured to be, accurate and up to date as of the date of the Contract Documents.

CE Corps of Engineers
(U.S. Department of the Army)
Chief of Engineers - Referral
Washington, DC 20314 (202) 272-0660

CFR Code of Federal Regulations
Available from the Government Printing Office
N. Capitol St. between G and H St. NW
Washington, DC 20402 (202) 783-3238
(Material is usually first published in the "Federal Register")

CPSC Consumer Product Safety Commission
5401 Westbard Ave.
Bethesda, MD 20816 (800) 638-2772

CS Commercial Standard
(U.S. Department of Commerce)
Government Printing Office
Washington, DC 20402 (202) 377-2000

DOC Department of Commerce
14th St. and Constitution Ave., NW
Washington, DC 20230 (202) 377-2000

DOT Department of Transportation
400 Seventh St., SW
Washington, DC 20590 (202) 366-4000

EPA Environmental Protection Agency
401 M St., SW
Washington, DC 20460 (202) 382-2090

FAA Federal Aviation Administration
(U.S. Department of Transportation)
800 Independence Ave., SW
Washington, DC 20590 (202) 366-4000

NIST National Institute of Standards and Technology

(U.S. Department of Commerce)
Gaithersburg, MD 20899

(301) 975-2000

OSHA Occupational Safety and Health Administration
(U.S. Department of Labor)
Government Printing Office
Washington, DC 20402

(202) 523-6091

PS Product Standard of NBS
(U.S. Department of Commerce)
Government Printing Office
Washington, DC 20402

(202) 783-3238

1.05 GOVERNING REGULATIONS/AUTHORITIES

- A. The Consultant has contacted authorities having jurisdiction where necessary to obtain information necessary for preparation of Contract Documents. Contact authorities having jurisdiction directly for information and decisions having a bearing on the Work.
- B. Copies of Regulations: Obtain copies of the applicable regulations and retain at the Project Site, available for reference by parties who have a reasonable need for such reference.

1.06 SUBMITTALS

- A. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 09 50

SECTION 01 20 00

PROJECT MEETINGS

PART 1 - GENERAL

1.01 Related Documents

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 Summary

A. This Section specifies administrative and procedural requirements for project meetings including but not limited to:

1. Pre-Construction Conference
2. Pre-Installation Conferences
3. Coordination Meetings
4. Progress Meetings

B. Construction schedules are specified in another Division-1 Section.

1.03 Pre-Construction Conference

A. The Owner or his representative shall schedule a pre-construction conference and organizational meeting at the Project Site or other convenient location no later than 15 days after execution of the Agreement and prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.

B. Attendees: The Owner, Architect/Engineer and their consultants, the Program Manager, the Contractor and its superintendent, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the Work.

C. Agenda: Discuss items of significance that could affect progress including such topics as:

1. Tentative construction schedule
2. Critical Work sequencing

3. Designation of responsible personnel
4. Procedures for processing field decisions and Change Orders
5. Procedures for processing Applications for Payment
6. Distribution of Contract Documents
7. Submittal of Shop Drawings, Product Data and Samples
8. Preparation of record documents
9. Use of the premises
10. Office, Work and storage areas
11. Equipment deliveries and priorities
12. Safety procedures
13. First-aid
14. Security
15. Housekeeping
16. Working hours

1.04 Pre-Installation Conferences

- A. The Contractor or his representative shall conduct a pre-installation conference at the site before each construction activity that requires coordination with other construction. The Installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Architect and owner of scheduled meeting dates.
 1. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for:
 - a. Contract Documents
 - b. Options
 - c. Related Change Orders
 - d. Purchases
 - e. Deliveries
 - f. Shop Drawings, Product Data and quality control Samples
 - g. Possible conflicts
 - h. Compatibility problems
 - i. Time schedules
 - j. Weather limitations
 - k. Manufacturer's recommendations
 - l. Compatibility of materials
 - m. Acceptability of substrates
 - n. Temporary facilities

- o. Space and access limitations
 - p. Governing regulations
 - q. Safety
 - r. Inspection and testing requirements
 - s. Required performance results
 - t. Recording requirements
 - u. Protection
2. The Contractor or his representative shall record significant discussions and agreements and disagreements of each conference, along with the approved schedule. Distribute the record of the meeting to everyone concerned, promptly, including the Owner and Architect.
3. Do not proceed if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene the conference at the earliest feasible date.

1.05 Coordination Meetings

- A. The Contractor shall conduct project coordination meetings at regularly scheduled times convenient for all parties involved. Project coordination meetings are in addition to specific meetings held for other purposes, such as regular progress meetings and special pre-installation meetings.
- B. Request representation at each meeting by every party currently involved in coordination or planning for the construction activities involved.
- C. The Contractor shall record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.06 Progress Meetings

- A. The Owner or his representative shall conduct progress meetings at the Project Site at regularly scheduled intervals.
- B. Attendees: In addition to representatives of the Owner and Engineer/Architect, each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress.

- C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the Project.
1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 2. Review the present and future needs of each entity present, including such items as:
 - a. Interface requirements
 - b. Time
 - c. Sequences
 - d. Deliveries
 - e. Off-site fabrication problems
 - f. Access
 - g. Site utilization
 - h. Temporary facilities and services
 - i. Hours of Work
 - j. Hazards and risks
 - k. Housekeeping
 - l. Quality and Work standards
 - m. Change Orders
 - n. Documentation of information for payment requests
 3. Schedule Updating: Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule prior to the next meeting.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 20 00

SECTION 01 30 00

SUBMITTALS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:
 - 1. Contractor's construction schedule
 - 2. Submittal schedule
 - 3. Daily construction reports
 - 4. Shop Drawings
 - 5. Product Data
 - 6. Samples
- B. Administrative Submittals: Refer to other Division-1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:
 - 1. Permits
 - 2. Applications for payment
 - 3. Performance and payment bonds
 - 4. Insurance certificates
 - 5. List of Subcontractors
- C. The Schedule of Values submittal is included in Section "Applications for Payment."
- D. Inspection and test reports are included in Section "Quality Control Services."

1.03 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
 2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Consultant reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
 3. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for re-submittals.
 - a. Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Consultant will promptly advise the Contractor when a submittal being processed must be delayed for coordination.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. Allow two weeks for reprocessing each submittal.
 - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Consultant sufficiently in advance of the Work to permit processing.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
1. Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
 2. Include the following information on the label for processing and recording action taken.
 - a. Project name
 - b. Date
 - c. Name and address of Consultant
 - d. Name and address of Contractor
 - e. Name and address of subcontractor

- f. Name and address of supplier
 - g. Name of manufacturer
 - h. Number and title of appropriate Specification Section
 - i. Drawing number and detail references, as appropriate
- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Consultant using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.
 - 1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.
 - 2. Transmittal Form: Use AIA Document G 810.

1.04 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Phasing: Provide notations on the schedule to show how the sequence of the Work is affected by requirements for phased completion to permit Work by separate Contractors and partial occupancy by the Owner prior to Substantial Completion.
- B. Work Stages: Indicate important stages of construction for each major portion of the Work, including testing and installation.
- C. Distribution: Following response to the initial submittal, print and distribute copies to the Consultant, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.
 - 1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
 - 2. Contractor shall include an updated schedule with each payment requisition.

1.05 SUBMITTAL SCHEDULE

- A. After development and acceptance of the Contractor's construction schedule, prepare a complete schedule of submittals. Submit the schedule within 10 days of the date required for establishment of the Contractor's construction schedule.

1. Coordinate submittal schedule with the list of subcontracts, schedule of values and the list of products as well as the Contractor's construction schedule.
 2. Prepare the schedule in chronological order; include submittals required during the first 90 days of construction. Provide the following information:
 - a. Scheduled date for the first submittal
 - b. Related Section number
 - c. Submittal category
 - d. Name of subcontractor
 - e. Description of the part of the Work covered
 - f. Scheduled date for re-submittal
 - g. Scheduled date the Consultant's final release or approval
- B. Distribution: Following response to initial submittal, print and distribute copies to the Consultant's, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.
1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- C. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

1.06 DAILY CONSTRUCTION REPORTS

- A. Prepare a daily construction report, recording the following information concerning events at the site; and submit duplicate copies to the Consultant at weekly intervals:
1. List of subcontractors at the site
 2. Approximate count of personnel at the site
 3. High and low temperatures, general weather conditions
 4. Accidents and unusual events
 5. Meetings and significant decisions
 6. Stoppages, delays, shortages, losses
 7. Meter readings and similar recordings
 8. Emergency procedures
 9. Orders and requests of governing authorities
 10. Change Orders received, implemented
 11. Services connected, disconnected
 12. Equipment or system tests and start-ups

13. Partial Completions, occupancies
14. Substantial Completions authorized

1.07 SHOP DRAWINGS

- A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.
- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
 1. Dimensions
 2. Identification of products and materials included
 3. Compliance with specified standards
 4. Notation of coordination requirements
 5. Notation of dimensions established by field measurement
 6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 36" x 48"
 7. Initial Submittal: Submit one correctable translucent reproducible print and one blue or black-line print for the Consultant's review; the reproducible print will be returned
 8. Initial Submittal: Submit 2 blue or black-line prints for the Consultant's review; one will be returned
 9. Final Submittal: Submit 5 blue or black-line prints; submit 7 prints where required for maintenance manuals. 1 print will be retained; the remainder will be returned
 10. Final Submittal: Submit 5 blue or black-line prints and 7 additional prints where required for maintenance manuals, plus the number of prints needed by the Consultant for distribution. 2 prints will be retained; the remainder returned
 - a. One of the prints returned shall be marked-up and maintained as a "Record Document."
 11. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.
 12. Submission in electronic format (PDF) may be acceptable as approved by Owner/Engineer.

- C. Coordination drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.
 - 1. Preparation of coordination Drawings is specified in section "Project Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
 - 2. Submit coordination Drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.

1.08 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."
 - 1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations
 - b. Compliance with recognized trade association standards
 - c. Compliance with recognized testing agency standards
 - d. Application of testing agency labels and seals
 - e. Notation of dimensions verified by field measurement
 - f. Notation of coordination requirements
 - 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
 - 3. Preliminary Submittal: Submit a preliminary single-copy of Product Data where selection of options is required.
 - 4. Submittals: Submit 5 copies of each required submittal; submit 7 copies where required for maintenance manuals. The Consultant will retain one, and will return the others marked with action taken and corrections or modifications required.

- a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
- 5. Submission in electronic format (PDF) may be acceptable as approved by Owner/Engineer.
- 6. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
 - a. Do not proceed with installation until an applicable copy of Product Data applicable is in the installer's possession.
 - b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.09 SAMPLES

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.
 - 1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the Consultant's Sample. Include the following:
 - a. Generic description of the Sample
 - b. Sample source
 - c. Product name or name of manufacturer
 - d. Compliance with recognized standards
 - e. Availability and delivery time
 - 2. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
 - a. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.

- b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.
 - c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.
 - 3. Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.
 - a. Preliminary submittals will be reviewed and returned with the Consultant's mark indicating selection and other action.
 - 4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 4 sets; three will be returned marked with the action taken.
 - 5. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
 - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.
 - 1. Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.
 - a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.10 ARCHITECT'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Consultant will review each submittal, mark to indicate action taken, and return promptly.
 - 1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Consultant will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:
 - 1. Final Unrestricted Release: Where submittals are marked "Accepted," that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
 - 2. Final-But-Restricted Release: When submittals are marked "Accepted as Noted," that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
 - 3. Returned for Re-submittal: When submittal is marked "Not Accepted, Revise and Resubmit," do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
 - a. Do not permit submittals marked "Not Accepted, Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.
 - 4. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required."

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION (Not Applicable).

END OF SECTION 01 30 00

SECTION 01 31 00

PROSECUTION AND PROGRESS

PART 1 - GENERAL

1.01 Related Documents

Drawings and general provisions of contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 Date For Completion

- A. The Contractor shall complete the Work on or before the date or within the time specified in the Contract, unless that date or time is duly extended according to the Contract.

1.03 Progress Schedule

- A. The Contractor shall submit to the Engineer for approval by the Owner, within ten (10) calendar days following the award of contract, a progress schedule, showing the order in which the Contractor proposes to carry out the Work, the dates on which he will start controlling items, and the contemplated dates for completing. The Contractor's submission may be a critical path flow chart, bar graph, or other appropriate device of the Contractor's choice, and shall clearly indicate the various types of work to be in progress and show progress of the completed work at any point through the term of the Contract. The Progress Schedule shall show that each of the Stages of the Contract will be substantially completed within the times provided in the Contract Documents.
- B. If the Contractor's progress is materially affected by changes in the Plans or in the amount of the Work, or, in the event, in the sole judgment of the Engineer or its representative such changes become necessary in the best interests of the project due to unforeseen circumstances, or the Contractor has failed to comply with its approved Progress Schedule, Contractor shall submit a revised Progress Schedule if requested by the Engineer, that shall show how he proposes to prosecute the balance of the Work. The Contractor shall make every effort to comply with the Progress Schedule submitted by him consistent with all Contract requirements, including the order of performance of specified portions of the Work. Payment may be withheld to the Contractor while he is delinquent in the submission of any Progress Schedule.

1.04 Temporary Suspension of Work

- A. The Owner shall have the authority to suspend, delay or interrupt all or any part of the work as he may deem necessary, due to conditions that in his opinion warrant such action; or for such time as is necessary by reason of failure on the part of the Contractor to carry out orders given, or to perform in accordance with any or all provisions of the Contract. The Engineer will notify the Contractor in writing of all such suspensions, delays or interruptions.
- B. The Owner reserves the right to recover any incurred damages by deducting the amount thereof out of any monies due or that may become due the Contractor, notwithstanding any liens, notices or liens or actions of subcontractors, and if said monies be insufficient to cover said damages, then the Contractor or the Surety shall promptly pay the amounts due.

1.05 Default on Contract

- A. If the Contractor fails to begin the Work under the Contract within ten (10) days after the date of the Notice to Proceed, or fails to perform the Work with sufficient workmen, equipment or materials to insure completion of the Work within the specified time or times, or shall perform the Work unsuitably, as determined by the Engineer, or shall neglect or refuse to remove materials or perform anew such work as shall be rejected as defective and unsuitable, or shall discontinue the prosecution of the Work, or if the Contractor shall become insolvent to be declared bankrupt, or shall commit any act of bankruptcy or insolvency, or shall make an assignment for the benefit of creditors, or for any other cause whatsoever shall not carry on the Work in a manner approved by the Engineer, the Engineer shall give notice in writing to the Contractor and his surety of such actions or delinquency, said notice to advise of the corrective measures or action required. If the Contractor, within a period of seven (7) days after said notice, shall not proceed in accordance therewith, the Owner shall, upon written certificate from the Engineer of the fact of such delinquency or improper actions and the Contractor's failure to comply with said notice, have full power and authority to forfeit the rights of the Contractor and at its option to call upon the surety to complete the Work in accordance with the terms of the Contract, or it may take over the Work, including any or all materials and equipment within the work area as may be suitable and acceptable, and may complete the Work by entering into a new Agreement, with or without competitive bidding, for the completion of said Contract according to the terms and provisions thereof, or use such other methods as, in its opinion, shall be required for the completion of said Contract according to the terms and provisions thereof in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the Work under Contract, may be deducted from any monies due or which may become due on such Contract.

1.06 Subletting of Contract

- A. Approval in writing of a subcontractor shall be construed as approval for the Contractor's subletting of that portion of the Work to be done by the subcontractor. Subcontractors must be approved by the Engineer before commencing any work. Subcontractors shall be recognized only in the capacity of employees or workmen of the Contractor and shall be subject to the same requirements as to character and competence as the Contractor. Requests for approval of subcontractors shall show the nature and percentages of the Work to be done by each subcontractor, such percentages to be computed cost of the Work to be subcontracted, based on proposed quantities of Contract work items and unit prices, in relation to the total Contract. The Contractor shall not, under any circumstances, be relieved of his full and complete liability and obligations for the entire work under the contract and the Engineer shall not be required to deal directly with subcontractors.

1.07 Limitations of Operations

- A. The contractor shall contact and coordinate with the Owner for specific requirements of commercial space tenants and scheduling purposes.
- B. The Contractor shall at all times conduct his work so as to minimize the interference with or inconvenience to the normal operations of the spaces not being repaired or worked within. At any time when, in the judgment of the Engineer, the Contractor has obstructed or closed an area of the Site or is carrying on operations causing greater interference or inconvenience than necessary for the proper prosecution of the Work, the Engineer may require the Contractor to finish the section of the Work which is in progress before work is started on any additional section or require the Contractor to take such further actions so as to minimize inconvenience to vehicular or pedestrian traffic or as otherwise necessary.
- C. The Contractor shall arrange his work and his material so as not to interfere with the operations of other contractors engaged upon adjacent work, and to join his work to that of other in a proper manner, and in accordance with Plans and Specifications, and to coordinate the sequence of his work in relation to that of other contractors, and as may be directed by the Engineer from time to time as the Work progresses.

- D. Each Contractor shall be responsible for any damage done by him or his agents to the Work performed by another Contractor.
- E. The Contractor shall coordinate the available staging/storage area, superintendent's office (field office) space, etc. in the Site and the dumpster area with the Owner. The Contractor may be required to establish the space for this purpose outside the Garage. If so, he shall comply with all requirements by the Owner, City of New Haven and State of Connecticut.
- F. The Contractor shall pay special attention to the noise level generated by the selective demolition operation. The use of jackhammers equipment shall only be allowed as indicated in the contract Special Conditions or as otherwise approved in writing by the owner. Scarifying, debris removal, shot blasting and sandblasting shall be performed only as approved by the Owner or its representative so as to not interfere with facility operations, or cause disruptive noise to nearby residential or business uses.
- G. The Contractor may use the electricity (power) at existing fixtures and outlets for the completion of the work. Contractor shall provide additional power as needed for its operation if the existing is insufficient.
- H. The Contractor shall furnish all temporary service connections, wiring, meters, transformers, fixtures, extensions, cords, lamps, etc., and shall remove them upon completion. All temporary light and power shall be in accordance with the local code requirements.
- I. Water shall be furnished by the Owner at existing fixtures and outlets and such water availability is limited. If additional quantity is required than can be obtained from existing fixtures the Contractor shall be responsible.
- J. The Contractor shall furnish all temporary service connections, pumps, hoses, metering equipment, etc., and shall pay all fees associated with temporary service connections to fire hydrants and such, if required.
- K. The Contractor shall verify the adequacy (capacity) of existing drainage within the facility to remove excess water during construction and shall ensure the operation of existing drainage facilities both before construction commences and after the construction work has been completed.

1.08 Workmen, Methods and Equipment

- A. The Contractor shall at all times employ sufficient labor and equipment for prosecuting the several classes of work to full completion in the manner and time required by these Specifications and the Contract.
- B. All workmen shall have sufficient skill and experience to properly perform the work assigned to them. Workmen engaged in special work or skilled work shall have sufficient specialized experience in such work and in the operation of the required equipment to perform all work on time in a proper and safe manner.
- C. Any person employed by the Contractor or by any subcontractor who, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the Work without the approval of the Engineer.
- D. Should the Contractor fail to remove such person or persons as required above, or fail to furnish suitable skilled and sufficient personnel for the proper prosecution of the Work, the Engineer may suspend the Work by written notice until the Contractor employs proper and sufficient personnel for the Work. All equipment that is proposed to be used on the Work shall be of sufficient size and in such mechanical condition as to meet requirement of the Contract and to produce work that meets to exceed the quality of work required by the Contract. Equipment used on any portion of the project shall be such that no damage to adjacent work areas or property will result from its use.
- E. The Contractor shall prosecute the Work for the number of days per week and the number of hours per day as are necessary to complete the Work by the date or dates provided in the Contract. If in the opinion of the Engineer the actual progress on the Work falls behind the estimate progress as outlined in the approved Progress Schedule submitted by the Contractor, or if it becomes apparent that the construction progress is such that the Work will not be completed within the specified time or times, the Contractor shall implement, at the direction and with the approval of the Engineer, any or all of the following at no additional cost to the Owner.
 - 1. Provide additional equipment of the Work
 - 2. Add necessary additional manpower

3. Increase working hours including Saturdays, Sundays, and holidays subject to any restrictions that may be set forth in the Special Conditions. When the methods and equipment to be used by the Contractor in performing the Work are not prescribed in the Contract, the Contractor is free to use any reasonable methods of equipment to perform the Work, as long as he demonstrates to the satisfaction of the Engineer that such methods or equipment will accomplish the Work in conformity with the requirements of the Contract.
- F. When the Contract specifies that the construction be performed by the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the Contract, he may request authorization from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed to be used and explanation of the reasons for desiring to make the change.
- G. If approval is given, it will be under the condition that the Contractor will be fully responsible for producing construction work in conformity with Contract requirements. If, after use of the substituted methods or equipment, the Engineer determines that the work produced does not meet Contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining construction with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the construction items involved nor in Contract time as a result of authorizing any change in methods or equipment under these provisions.

1.09 Termination of Contract Prior to Completion

- A. The performance of the Work under the Contract may be terminated in whole or, in part from time to time, whenever the Engineer shall determine that such termination is in the best interest of the Owner. In the event of termination pursuant to this Section, the Contractor shall be entitled to no damages or compensation except as hereinafter provided.
- B. Termination of performance of the Work under the Contract, in whole or in part, shall be subject to the conditions herein, and it is the intent of these provisions that a settlement equitable to both the Contractor and the Owner be made in connection with a termination according to this Sub-section.

- C. For all Work completed by the Contractor prior to the effective date or dates of termination, payment will be made to the Contractor for the actual number of units or items completed at the Contract unit or percentage of completion for lump sum prices. It is agreed and understood, however, that the Contractor shall, in no event, be entitled to compensation for the loss of anticipated profits, whether for completed, uncompleted work, nor shall any claims therefore by the Contractor be considered.
- D. For all materials obtained by the Contractor for the Work prior to notice of termination, that have been inspected, tested and accepted by the Engineer, and that have not been incorporated in the Work and cannot be returned to the supplier, payment will be made to the Contractor for the actual costs for all such material including freight charges, as shown by original validated bills. The materials, when so paid for by the Owner, shall become the property of the Owner.
- E. Termination of the performance of the Work under the Contract by the Owner, as hereinbefore specified, shall not relieve the Contractor or his surety of the responsibility for the Work performed as required by the Contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 31 00

SECTION 01 32 00

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 Related Documents

Drawings and general provisions of contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 General Requirements

- A. Actual quantities of work completed under the Contract must be reviewed by the Engineer prior to payment. Measurement will be in accordance with United States standards and in compliance with recognized engineering practices. All packaged materials shall be marked plainly, showing the amount and nature of contents and shall be delivered intact.

1.03 Scope of Payment

- A. The Contractor agrees to and shall receive and accept the compensation as herein provided, as payment in full for the Work, including but not limited to, furnishing all materials, transportation, labor, tools, and equipment; for performing all work contemplated and embraced under the Contract; for all loss or damage arising out of the nature of the Work or from the action of the elements; for any unforeseen difficulties, obstructions or interferences that may arise or be encountered during the prosecution of the Work until its final acceptance by the Owner as determined by the specifications.
- B. In cases where the "Payment" clause in the Specifications related to any unit price cover and be considered compensation for certain work or material essential to the item, the same work or material shall not also be measured or paid for under any other pay item that may appear elsewhere in the Specifications.
- C. The partial payment of any portion of the Work certified by the Engineer shall in no way constitute an acknowledgment of the acceptance of the Work, nor in any way prejudice or affect the obligation of the Contractor to repair, correct, renew, or replace at his expense any defects or imperfections in the construction or in the strength or quality of the materials used in or about the construction of the Work under Contract and its appurtenances, nor any damage due to attributable to such defects, which defects, imperfections or damage should have been covered before or after payment for and acceptance of the Work.

- D. **No payment shall be made for stored materials or equipment. Payment shall be made only for materials and equipment in-place and accepted by Owner, less applicable retainage.**

1.04 Payment for Extra Work: Reference General Conditions

1.05 Canceled Items

- A. It shall be in the sole judgment and sole discretion of the Owner or its representatives to cancel or alter any or all portions of the Contract. Should such actions result in elimination or non-completion of any portion of the Contract, payment shall be made commensurate with the work performed.
- B. For the canceled work completed by the Contractor, payment shall be made to the Contractor for the actual number of units or items completed at the Contract unit or percentage of completion for lump sum prices.
- C. For materials obtained by the Contractor for the unfinished (uncompleted) portions of the canceled work, that have been inspected, tested and accepted by the Engineer, and that have not been incorporated in the canceled work, payment shall be made to the Contractor for the actual costs for all such materials, including freight charges, as shown by the original paid invoices. The materials, when so paid for by the Owner, shall become the property of the Owner.

1.06 Acceptance and Final Payment

- A. When the repairs and preventive maintenance measures provided for by the Contract shall have been completely performed by the Contractor according to the Contract and all parts of the Work have been approved and accepted by the Engineer, the final pay request will be prepared by the Contractor and submitted to the Engineer for approval. Along with the final pay request the Contractor must also submit the following:
1. All guarantees and warranties from General Contractor, Sub-contractors and Manufacturers
 2. Final Waiver of Lien from Contractors and Sub-contractors
 3. Complete mark up set of drawings and project manual showing amount and location of all work performed

4. Approved maintenance and operation manuals for all components incorporated into the Work. Manuals shall include spare parts listing, model numbers, serial numbers, manufacturer's addresses and telephone numbers
 5. Contractor's Release and Hold Harmless Agreement
 6. Final reports and other information required in the General and Supplementary Conditions; final daily logs; consent of surety to final payment and release of retainage (also see Section 01700)
- B. The Engineer will review all submittals, perform necessary measurements and computations and give final recommendation to Owner.
- C. The amount of this final estimate, less any sums deductible or retained under the provisions of the Contract, will be paid to the Contractor as soon as practicable after the final acceptance, provided the Contractor has furnished to the Engineer satisfactory evidence that all sums of money due for any labor, materials, apparatus, fixtures or machinery furnished for the purpose of such improvements have been paid, or that the person or persons to whom the same may be due have consented to such final payment.
- D. The Engineer shall determine the amount or quantity of all kinds of work herein contracted to be done and decide every question that can or may arise regarding to the execution and performance of this Contract on the part of said Contractor.
- E. The acceptance by the Contractor of the final payment shall constitute a release and waiver of any and all rights and privileges under the terms of the Contract; further, the acceptance by the Contractor of final payment shall relieve the Owner from any and all claims or liabilities for anything done or furnished relative to the Work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 32 00

SECTION 01 40 00

QUALITY CONTROL SERVICES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section specifies administrative and procedural requirements for quality control services.
- B. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include contract enforcement activities performed by the Consultant.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
 - 1. Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.
 - 2. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.
 - 3. Requirements for the Contractor to provide quality control services required by the Consultant, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.03 RESPONSIBILITIES

- A. Contractor Responsibilities: The Contractor shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and required by governing authorities, except where they are specifically indicated to be the Owner's responsibility, or are provided by another identified entity; these services include those specified to be performed by an independent agency and not by the Contractor. Costs for these services shall be included in the Contract Sum.
1. The Contractor shall employ and pay an independent agency, to perform specified quality control services.
 2. The Owner will engage and pay for the services of an independent agency to perform inspections and tests specified as the Owner's responsibilities.
 - a. Where the Owner has engaged a testing agency or other entity for testing and inspection of a part of the Work, and if the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the Owner, unless otherwise agreed in writing with the Owner.
 3. Retesting: The Contractor is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.
 - a. Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.
 4. Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:
 - a. Providing access to the Work and furnishing labor and facilities necessary to facilitate inspections and tests
 - b. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples

- c. Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories
 - d. Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency
 - e. Security and protection of samples and test equipment at the Project site
- B. Owner Responsibilities: The Owner will provide inspections, tests and similar quality control services specified to be performed by independent agencies and not by the Contractor, except where they are specifically indicated as the Contractor's responsibility or are provided by another identified entity.
 - 1. The Owner will employ and pay for the services of an independent agency, testing laboratory or other qualified firm to perform services which are the Owner's responsibility from the allowance set aside for testing in the contract sum.
- C. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling and testing of materials and construction specified in individual Specification Sections shall cooperate with the Consultant and Contractor in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.
 - 1. The agency shall notify the Consultant and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.
 - 3. The agency shall not perform any duties of the Contractor.
- D. Coordination: The Contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
 - 1. The Contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities.

1.04 SUBMITTALS:

- A. The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the Consultant, in duplicate, unless the Contractor is responsible for the service. If the Contractor is responsible for the service, submit a certified written report of each inspection, test or similar service through the Contractor, in duplicate.
 - 1. Submit additional copies of each written report directly to the governing authority, when the authority so directs
 - 2. Report Data: Written reports of each inspection/test or similar service shall include, but not be limited to:
 - a. Date of issue
 - b. Project title and number
 - c. Name, address and telephone number of testing agency
 - d. Dates and locations of samples and tests or inspections
 - e. Names of individuals making the inspection or test
 - f. Designation of the Work and test method
 - g. Identification of product and Specification Section
 - h. Complete inspection or test data
 - i. Test results and interpretations of test results
 - j. Ambient conditions at the time of sample taking and testing
 - k. Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements
 - l. Name and signature of laboratory inspector
 - m. Recommendations on retesting

1.05 QUALITY ASSURANCE

- A. Qualification for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories that are pre-qualified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and that specialize in the types of inspections and tests to be performed.
 - 1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."
- B. Protect construction exposed by or for quality control service activities, and protect repaired construction.
- C. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION 01 40 00

SECTION 01 50 00

TEMPORARY FACILITIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.
- B. Reference Phasing Plan and Narrative for additional and prioritized requirements. This specification is not intended to replace the requirements noted in the Phasing Plan and Narrative, but rather to supplement them. When a discrepancy is noted, the more strict requirement shall be adhered to.

1.02 SUMMARY

- A. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.
- B. Temporary utilities required include but are not limited to:
 - 1. Water service and distribution
 - 2. Temporary electric power and light
 - 3. Telephone service
- C. Temporary construction and support facilities required include but are not limited to:
 - 1. Temporary heat
 - 2. Field offices and storage sheds
 - 3. Sanitary facilities, including drinking water
 - 4. Temporary enclosures
 - 5. Temporary Project identification signs and bulletin boards
 - 6. Waste disposal services
 - 7. Rodent and pest control
 - 8. Construction aids and miscellaneous services and facilities

D. Security and protection facilities required include but are not limited to:

1. Temporary fire protection
2. Barricades, warning signs, lights
3. Sidewalk bridge or enclosure fence for the site
4. Environmental protection

1.03 SUBMITTALS

- A. Temporary Utilities: Submit reports of tests, inspections, meter readings and similar procedures performed on temporary utilities.
- B. Implementation and Termination Schedule: Submit a schedule indicating implementation and termination of each temporary utility within 15 days of the date established for commencement of the Work.

1.04 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
1. Building Code requirements
 2. Health and safety regulations
 3. Utility company regulations
 4. Police, Fire Department and Rescue Squad rules
 5. Environmental protection regulations
- B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and NECA Electrical Design Library "Temporary Electrical Facilities."
1. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared jointly by AGC and ASC, for industry recommendations.
 2. Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with National Electric Code (NFPA 70).
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.05 PROJECT CONDITIONS

- A. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of the permanent service.
- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Provide new materials; if acceptable to the Architect, undamaged previously used materials in serviceable condition may be used. Provide materials suitable for the use intended.
- B. Lumber and Plywood:
 - 1. For job-built temporary offices, shops and sheds within the construction area, provide UL labeled, fire treated lumber and plywood for framing, sheathing and siding.
 - 2. For signs and directory boards, provide exterior type, Grade B-B High Density Concrete Form Overlay Plywood conforming to PS-1, of sizes and thickness indicated.
 - 3. For fences and vision barriers, provide exterior type, minimum 3/8" thick plywood.
 - 4. For safety barriers, sidewalk bridges and similar uses provide minimum 5/8" thick exterior plywood.
- C. Paint: Comply with requirements of Division-9 Section "Painting."
 - 1. For job-built temporary offices, shops, sheds, fences and other exposed lumber and plywood, provide exterior grade acrylic-latex emulsion over exterior primer.

2. For sign panels and applying graphics, provide exterior grade alkyd gloss enamel over exterior primer.
 3. For interior walls of temporary offices, provide two coats interior latex flat wall paint.
- D. Tarpaulins: Provide waterproof, fire-resistant, UL labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures provide translucent nylon reinforced laminated polyethylene or polyvinyl chloride fire retardant tarpaulins.
- E. Water: Provide potable water approved by local health authorities.
- F. Open-Mesh Fencing: Provide 11-gage, galvanized 2-inch, chain link fabric fencing 6-feet high with galvanized barbed wire top strand and galvanized steel pipe posts, 1-1/2" I.D. for line posts and 2-1/2" I.D. for corner posts.

2.02 EQUIPMENT

- A. General: Provide new equipment; if acceptable to the Consultant, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- B. Water Hoses: Provide 3/4" heavy-duty, abrasion-resistant, flexible rubber hoses 100 ft. long, with pressure rating greater than the maximum pressure of the water distribution system; provide adjustable shut-off nozzles at hose discharge.
- C. Electrical Outlets: Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.
- D. Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress.
- E. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- F. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.

- G. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- H. Temporary Toilet Units: Provide self-contained single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material.
- I. First Aid Supplies: Comply with governing regulations.
- J. Fire Extinguishers: Provide hand-carried, portable UL-rated, class "A" fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures.
 - 1. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.

3.02 TEMPORARY UTILITY INSTALLATION

- A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendations.
 - 1. Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.

2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
 3. Obtain easements to bring temporary utilities to the site, where the Owner's easements cannot be used for that purpose.
 4. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Consultant, and will not be accepted as a basis of claims for a Change Order.
- B. Temporary Water Service: The contractor shall make arrangements with the Building Management for temporary water from existing sources at the facility. The Contractor shall be responsible for all hoses, connections, etc., required from the point of water source at the facility.
- C. Temporary Electric Power Service: The Contractor shall make all arrangements for and shall install and pay for the temporary electric service. The Contractor shall furnish, install and maintain all temporary and power facilities required by the work. Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload protected disconnects, automatic ground-fault interrupters and main distribution switch gear.
1. Power Distribution System: Install wiring overhead, and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, AC 20 ampere rating, and lighting circuits may be non-metallic sheathed cable where overhead and exposed for surveillance.
- D. Temporary Lighting:
1. Install and operate temporary lighting that will fulfill security and protection requirements, without operating the entire system, and will provide adequate illumination for construction operations and traffic conditions.
- E. Temporary Telephones: Provide temporary telephone service for all personnel engaged in construction activities, throughout the construction period. Install telephone on a separate line for each temporary office and first aid station. Where an office has more than two occupants, install a telephone for each additional occupant or pair of occupants.
1. At each telephone, post a list of important telephone numbers.

- F. Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off the site in a lawful manner.
1. Filter out excessive amounts of soil, construction debris, chemicals, oils and similar contaminants that might clog sewers or pollute waterways before discharge.
 2. Connect temporary sewers to the municipal system as directed by the sewer department officials.
 3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.
- G. Provide earthen embankments and similar barriers in and around excavations and sub-grade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

3.03 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

- A. Locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities for easy access at locations approved by the Owner.
1. Maintain temporary construction and support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- B. Provide incombustible construction for offices, shops and sheds located within the construction area, or within 30 feet of building lines. Comply with requirements of NFPA 241.
- C. Temporary Heat: Provide temporary heat required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

- D. Heating Facilities: Except where use of the permanent system is authorized, provide vented self-contained LP gas or fuel oil heaters with individual space thermostatic control.
1. Use of gasoline-burning space heaters, open flame, or salamander type heating units is prohibited.
- E. Field Offices: Provide insulated, weather-tight temporary offices of sufficient size to accommodate required office personnel at the Project site. Keep the office clean and orderly for use for small progress meetings. Furnish and equip offices as follows:
1. Furnish with a desk and chairs, a 4-drawer file cabinet, plan table and plan rack and a 6-shelf bookcase, as required by the Owner
- F. Storage and Fabrication Sheds: Install storage and fabrication sheds, sized, furnished and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within the building or elsewhere on the site as approved by the Owner.
- G. Sanitary facilities include temporary toilets, wash facilities and drinking water fixtures. Comply with regulations and health codes for the type, number, location, operation and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.
1. Provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility. Provide covered waste containers for used material.
- H. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.
- I. Drinking Water Facilities: Within temporary office, provide containerized tap-dispenser bottled-water type drinking water units, including paper supply.
- J. Temporary Enclosures: Provide temporary enclosure for protection of construction in progress and completed, from exposure, foul weather, other construction operations and similar activities.
1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.

2. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 square feet or less with plywood or similar materials.
3. Where temporary wood or plywood enclosure exceeds 100 square feet in area, use UL-labeled fire-retardant treated material for framing and main sheathing.
4. All temporary partitions shall be designed to attenuate noise on all sides of the garage and to prevent unauthorized access into the work area. The contractor shall pay special attention to the noise levels generated by the concrete removal operations and shotblasting/blast tracking of the deck prior to applicable work; obey all applicable noise laws. The contractor shall also use noise dampening/sound absorbing insulation in perimeter partitions to abate noise in the immediate vicinity and to nearby residential apartments, businesses, schools, medical buildings, theaters, and hotels. The partitions shall protect other areas within the facility from water, dust and flying debris. The contractor shall provide a dust collection/filter system to prevent dust and debris from escaping in the work area ventilation exhaust. All drainage systems shall be protected from damage and shall be maintained in functioning order.

K. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

3.04 PROTECTION FACILITIES INSTALLATION

A. Temporary Fire Protection:

1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell
2. Store combustible materials in containers in fire-safe locations
3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas

4. Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition
- B. Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.
- C. Security Enclosure and Lockup:
 1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- D. Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.05 OPERATION, TERMINATION AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation and similar facilities on a 24-hour day basis where required to achieve indicated results and to avoid possibility of damage.
 2. Protection: Prevent water filled piping from freezing.

- C. Termination and Removal: Unless the Owner requests that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of the Contractor.
 2. Where the area is intended for landscape development remove soil and aggregate fill that does not comply with requirements for fill or subsoil in the area. Remove materials contaminated with substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs and sidewalks at the temporary entrances, as required by the governing authority.
 3. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:
 - a. Replace air filters and clean inside of ductwork and housings
 - b. Replace significantly worn parts and parts that have been subject to unusual operating conditions

END OF SECTION 01 50 00

SECTION 01 60 00

MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All Contract Documents shall apply to work of this Section.

1.02 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
- B. The Contractor's Construction Schedule and the Schedule of Submittals are included under Section "Submittals."
- C. Standards: Refer to Section "Reference Standards and Definitions" for applicability of industry standards to products specified.
- D. Administrative procedures for handling requests for substitutions made after award of the Contract are included under Section "Product Substitutions."

1.03 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - a. "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.

2. "Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

1.04 SUBMITTALS

- A. Product List Schedule: Prepare a schedule showing products specified in a tabular form acceptable to the Consulting Engineer. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed.
 1. Coordinate the product list schedule with the Contractor's Construction Schedule and the Schedule of Submittals.
 2. Form: Prepare the product listing schedule with information on each item tabulated under the following column headings:
 - a. Related Specification Section number
 - b. Generic name used in Contract Documents
 - c. Proprietary name, model number and similar designations
 - d. Manufacturer's name and address
 - e. Supplier's name and address
 - f. Installer's name and address
 - g. Projected delivery date, or time span of delivery period
 3. Initial Submittal: Within seven days after date of commencement of the Work, submit three copies of an initial product list schedule. Provide a written explanation for omissions of data, and for known variations from Contract requirements.
 - a. At the Contractor's option, the initial submittal may be limited to product selections and designations that must be established early in the Contract period.
 4. Completed Schedule: Within 15 days after date of commencement of the Work, submit three copies of the completed product list schedule. Provide a written explanation for omissions of data, and for known variations from Contract Documents.

5. Engineer's Action: The Engineer will respond in writing to the Contractor within one (1) week of receipt of the completed product list schedule. No response within this time period constitutes there is no objection to listed manufacturers or products, but does not constitute a waiver of the requirement that products comply with Contract Documents. The Engineer's response will include the following:
 - a. A list of unacceptable product selections, containing a brief explanation of reasons for this action

1.05 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.
 1. When specified products are available only from sources that do not or cannot produce a quantity adequate to complete project requirements in a timely manner, consult with the Engineer for a determination of the most important product qualities before proceeding. Qualities may include attributes relating to visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources that produce products that possess these qualities, to the fullest extent possible.
- B. Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project; the product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.
 1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.

3. Deliver products to the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
4. Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.
5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
7. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.
8. Progress payments will be made for work complete and in place only. No payment will be made for stored materials.

PART 2 - PRODUCTS

2.01 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents that are undamaged and, unless otherwise indicated, unused at the time of installation.
 1. Provide products complete with all accessories, trim, finishes, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:

1. Proprietary Specification Requirements: Where only a single product or manufacturer is named, provide the product indicated or Approved Equal.
2. Semi-proprietary Specification Requirements: Where two or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted.
 - a. Where products or manufacturers are specified by name, accompanied by the term "or equal," or "or approved equal" comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
3. Non-Proprietary Specifications: When the Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
4. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
5. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.
 - a. Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.
6. Compliance with Standards, Codes and Regulations: Where the Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the codes, standards, and regulations specified.
7. Visual Matching: Where Specifications require matching an established Sample, the Engineer's decision will be final on whether a proposed product matches satisfactorily.

- a. Where no product available within the specified category matches satisfactorily and also complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category, or for noncompliance with specified requirements.
- 8. Visual Selection: Where specified product requirements include the phrase " . . . as selected from manufacturer's standard colors, patterns, textures . . . " or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Consulting Engineer will select the color, pattern and texture from the product line selected.
- 9. Allowances: Refer to individual Specification Sections and "Allowance" provisions in Division-1 for allowances that control product selection, and for procedures required for processing such selections.

PART 3 - EXECUTION

3.01 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
 - 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

3.02 SYSTEMS DEMONSTRATION

- A. Prior to final inspection, the Contractor shall demonstrate the operation of each system to Architect/Engineer or Owner.
- B. The Contractor shall instruct the Owner's personnel in operation, adjustment, and maintenance of equipment and systems, using the operation and maintenance data as the basis of instruction.

END OF SECTION 01 60 00

SECTION 01 63 10

PRODUCT SUBSTITUTIONS

PART 1 - GENERAL

1.01 Related Documents

- A. All Contract Documents shall apply to work of this section.

1.02 Summary

- A. This Section specifies administrative and procedural requirements for handling requests for substitutions made after award to the Contract.
- B. The Contractor's Construction Schedule and the Schedule of Submittals are included under Section "Submittals".
- C. Standards: Refer to Section "Reference Standards and Definitions" applicability of industry standards to products specified.
- D. Procedural requirements governing the Contractor's selection of products and product options are included under section "Materials and Equipment".

1.03 Definitions

- A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "substitutions". The following are not considered substitutions:
 - 1. Substitutions requested by Bidders during the bidding period, and accepted prior to award of Contract, are considered as included in the Contract Documents and are not subject to requirements specified in this Section for substitutions
 - 2. Revisions to Contract Documents requested by the Owner or Architect
 - 3. Specified options of products and construction methods included in Contract Documents

4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities

1.04 Submittals

- A. Substitution Request Submittal: Requests for substitution will be considered if they are received within 60 days after the commencement of work. Requests received more than 60 days after commencement of the Work may be considered or rejected at the discretion of the Engineer/Architect.
 1. Submit a minimum of 4 copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for Change Order proposals.
 2. Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
 - a. Project data, including drawings and descriptions of products, fabrication and installation procedures
 - b. Samples, where applicable or requested
 - c. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.
 - d. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors that will become necessary to accommodate the proposed substitution.
 - e. A statement indicating the substitution and its effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
 - f. Cost information, including a proposal of the net change, if any in the Contract Sum.

- g. Certification by the Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
3. Engineer's Action: Within one week of receipt of the request for substitution, the Engineer will request additional information or documentation necessary for evaluation of the request. Within 2 weeks of receipt of the request, or one week of receipt of the additional information or documentation, whichever ever is later, the Engineer will notify the Contractor of acceptance or rejection of the proposed substitution. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name. Acceptance will be in the form of a written response or Change Order if there is an impact on project cost.

PART 2 - PRODUCTS

2.01 Substitutions

- A. Conditions: The Contractor's substitution request will be received and considered by the Engineer when one or more of the following conditions are satisfied, as determined by the Engineer; otherwise requests will be returned without action except to record noncompliance with these requirements.
- 1. Extensive revisions to Contract Documents are not required.
 - 2. Proposed changes are in keeping with the general intent of Contract Documents.
 - 3. The request is timely, fully documented and properly submitted.
 - 4. The request is directly related to an "or equal" clause or similar language in the Contract Documents.
 - 5. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.

6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 7. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. Additional responsibilities for the Owner may include additional compensation to the Engineer for redesign and evaluation services, increased cost of other construction by the Owner or separate Contractors, and similar considerations.
 8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
 9. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
 10. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.
- B. The Contractor's submittal and Engineer's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 63 10

SECTION 01 70 00

PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 **RELATED DOCUMENTS:**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 **SUMMARY:**

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Inspection procedures
 - 2. Project record document submittal
 - 3. Operating and maintenance manual submittal
 - 4. Submittal of warranties
 - 5. Final cleaning
- B. Closeout requirements for specific construction activities are included in the appropriate Sections.

1.03 **SUBSTANTIAL COMPLETION:**

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
 - 1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - a. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.

3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
 5. Submit record drawings, maintenance manuals, final project photographs, damage or settlement survey, property survey, and similar final record information.
 6. Deliver tools, spare parts, extra stock, and similar items.
 7. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
 8. Complete start-up testing of systems, and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
 9. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.
- B. Inspection Procedures: On receipt of a request for inspection, the Consultant will either proceed with inspection or advise the Contractor of unfilled requirements. The Consultant will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
1. The Consultant will repeat inspection when requested and assured that the Work has been substantially completed.
 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.04 **FINAL ACCEPTANCE:**

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 3. Submit a certified copy of the Consultant's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and the list has been endorsed and dated by the Consultant.
 4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion, or when the Owner took possession of and responsibility for corresponding elements of the Work.
 5. Submit consent of surety to final payment.
 6. Submit a final liquidated damages settlement statement.
 7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Re-inspection Procedure: The Consultant will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Consultant.
1. Upon completion of re-inspection, the Consultant will prepare a certificate of final acceptance, or inform the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 2. If necessary, re-inspection will be repeated.

1.05 **RECORD DOCUMENT SUBMITTALS:**

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Consultant's reference during normal working hours.

- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
 2. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
 3. Note related Change Order numbers where applicable.
 4. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.
1. Upon completion of the Work, submit record Specifications to the Consultant for the Owner's records.
- D. Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.
1. Upon completion of mark-up, submit complete set of record Product Data to the Consultant for the Owner's records.

- E. Record Sample Submitted: Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Consultant and the Owner's personnel to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.
- F. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Consultant for the Owner's records.
- G. Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable size. Bind properly indexed data into individual heavy-duty 2-inch, 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:
 - 1. Emergency instructions
 - 2. Spare parts list
 - 3. Copies of warranties
 - 4. Wiring diagrams
 - 5. Recommended "turn around" cycles
 - 6. Inspection procedures
 - 7. Shop Drawings and Product Data
 - 8. Fixture lamping schedule

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 **CLOSEOUT PROCEDURES**:

- A. Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:

1. Maintenance manuals
2. Record documents
3. Spare parts and materials
4. Tools
5. Lubricants
6. Fuels
7. Identification systems
8. Control sequences
9. Hazards
10. Cleaning
11. Warranties and bonds
12. Maintenance agreements and similar continuing commitments

B. As part of instruction for operating equipment, demonstrate the following procedures:

1. Start-up
2. Shutdown
3. Emergency operations
4. Noise and vibration adjustments
5. Safety procedures
6. Economy and efficiency adjustments
7. Effective energy utilization

3.02 **FINAL CLEANING:**

- A. General: General cleaning during construction is required by the General Conditions and included in Section "Temporary Facilities".
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

- c. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
 - d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
 - e. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
1. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION 01 70 00

SECTION 01 74 00

WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY:

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
 - 1. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
 - 2. General closeout requirements are included in Section "Project Closeout."
 - 3. Specific requirements for warranties for the Work and products and installations that are specified to be warranted, are included in the individual Sections.
 - 4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.03 DEFINITIONS

- A. Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
- B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.04 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or re-building; reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- E. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.05 SUBMITTALS

- A. Submit written warranties to the Consultant prior to the date certified for Substantial Completion. If the Consultant's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Consultant.

1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Consultant within fifteen days of completion of that designated portion of the Work.
- B. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner through the Consultant for approval prior to final execution.
- C. Forms for special warranties are included at the end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or the Contractor and subcontractor, supplier or manufacturer. Submit a draft to the Owner through the Consultant for approval prior to final execution.
 1. Refer to individual Sections for specific content requirements, and particular requirements for submittal of special warranties.
- D. Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Contractor, or by the subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- E. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.
 1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
 2. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS," the Project title or name, and the name of the Contractor.
 3. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 SCHEDULE OF WARRANTIES

A. Schedule: Provide warranties on products and installations as specified, but not limited to, below:

1. The Contractor (and applicable sub-contractors) shall provide a 2-year warranty (minimum) for all work performed to conform to the specifications in addition to specific warranties for individual products
2. Equipment (Division 11)

The Contractor (and applicable sub-contractors) shall reference applicable specifications for appropriate warranties for individual products.

END OF SECTION 01 74 00

DIVISION 2

EXISTING CONDITIONS

SECTION 02 07 00

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. **Contractor shall note that the Air Rights Parking Garage and the Union Station Parking Garage are constructed of a post-tensioned concrete structural configuration. No cores shall be drilled, or penetrations of any nature made, through the structural deck without prior written authorization by the Engineer. No concessions shall be given regarding this requirement.**

- B. Description

- 1. Furnish labor, materials, equipment and transportation necessary to do all concrete demolition, as shown on drawings and as specified herein, including but not necessarily limited to the following:
 - a. Removal of existing concrete, masonry, and other materials as noted on plans or directed by the Engineer
 - b. Dust and water control
 - c. Removal and disposal of all debris
 - d. Disconnecting and relocating/reinstalling any existing utility lines on the site which interfere with the repairs
 - e. Protection of all existing electrical systems, mechanical equipment, light fixtures, overhead piping, fire protection system etc. scheduled to remain
- 2. Contractor shall provide barricades with warning lights, enclose the construction area and take all precautions necessary to ensure public and employee safety.
- 3. All work shall be done in accordance with the requirements of all local and state agencies.

1.03 QUALITY ASSURANCE

- A. Demolition Contractor's Qualifications: Minimum of 5 years experience on comparable projects.
- B. Comply with all pertinent codes and regulations that apply to this type of work and with requirements of insurance carriers providing coverage for this work. Dispose of debris in a legal manner off site daily. Do not allow to accumulate on site.

1.04 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Schedule indicating proposed sequence of operations for selective demolition work to Owner's Representative for review prior to start of work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control protection.
 - 1. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations.
 - 2. Coordinate with on-site staff, schedule and logistics plans and/or with Owner's partial occupancy of completed work.
- C. Photographs of existing conditions of structure's surfaces, equipment, and adjacent improvements that might be misconstrued as damage related to removal operations. File with Owner's Representative prior to start of work.

1.05 JOB CONDITIONS

- A. Occupancy: Conduct selective demolition work in manner that will minimize need for disruption of other construction activities. Provide minimum of 72 hours advance notice to MGI of demolition activities that will affect other construction activities and/or Owner's operations.
- B. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.
 - 1. Conditions existing at time of inspection for bidding purposes will be maintained by Owner insofar as practicable. However, minor variations within structure may occur prior to start of selective demolition work.

- C. Partial Demolition and Removal: Items indicated to be removed but of salvageable value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed.
1. Storage or sale of removed items on site will not be permitted.
- D. Protections: Provide temporary barricades and other forms of protection to protect Owner's personnel and general public from injury due to selective demolition work.
1. Provide protective measures as required to provide free and safe passage of Owner's personnel and general public to occupied portions of the project.
 2. Erect temporary covered passageways as required by authorities having jurisdiction.
 3. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished and adjacent facilities or work to remain.
 4. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.
 5. Use all means necessary to protect existing facilities, utilities, and appurtenances within the project areas.
 6. Protect floors with suitable coverings when necessary.
 7. Dust and Water Control: Contractor shall contain particular debris generated by his work activities from polluting the atmosphere or waterways.
 8. Construct temporary insulated dust resistant partitions where required separating areas where noisy or extensive dirt or dust operations are performed. Equip partitions with dust resistant doors and security locks.
 9. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces and installation of new construction to ensure that no water leakage or damage occurs to structure or interior areas of existing building.
 10. On-site burning shall not be permitted.
 11. Remove protections at completion of work.

- E. Damages: Promptly repair damages caused to adjacent facilities by demolition work.
- F. Traffic: Conduct selective demolition operations and debris removal to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
 - 1. Do not close, block, or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- G. Flame Cutting: Do not use cutting torches for removal until work area is cleared of flammable materials. At concealed spaces, such as interior of ducts and pipe spaces, verify condition of hidden space before starting flame-cutting operations. Maintain portable fire suppression devices during flame-cutting operations.
- H. Utility Services: Maintain existing utilities in service and protect them against damage during demolition operations.
 - 1. Do not interrupt utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
 - 2. Maintain fire protection services during selective demolition operations.
- I. Environmental Controls: Use water sprinkling, temporary enclosures, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection.
 - 1. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. Use appropriate materials and proper equipment to complete the work of this Section. Provide all necessary barricades, warning devices, enclosures, etc. as required to comply with governing safety regulations.

PART 3 - EXECUTION

3.01 PREPARATION

- A. General: Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of areas to be demolished and adjacent facilities to remain.
1. Cease operations and notify Owner's Representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.
 2. Cover and protect equipment and fixtures from soilage or damage when demolition work is performed in areas where such items have not been removed.
 3. Erect and maintain dust resistant partitions and closures as required preventing spread of dust or fumes to occupied portions of the building.
 - a. Where selective demolition occurs immediately adjacent to occupied portions of the building, construct dust resistant partitions of minimum 4-inch studs and ½-inch fire-retardant plywood on demolition side.
 - b. Provide weatherproof closures for exterior openings resulting from demolition work.
 4. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.
 - a. Provide bypass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of 72 hours advance notice to MGI and Owner if shutdown of service is necessary during changeover.

3.02 DEMOLITION

- A. General: Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.

1. Demolish concrete in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power-driven impact tools except as indicated in the construction drawings.
 2. Locate demolition equipment throughout structure and promptly remove debris to avoid imposing excessive loads on supporting walls, floors, or framing.
 3. Provide services for effective air and water pollution controls as required by local authorities having jurisdiction.
- B. If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Consultant, written with accurate detail describing the unanticipated conflict. Pending receipt of directive from Owner's Representative, rearrange selective demolition schedule as necessary to continue overall job progress without undue delay.

3.03 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove from building site debris, rubbish, and other materials resulting from demolition operations. Transport and legally dispose off site.
1. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.
 2. Burning of removed materials is not permitted on project site.

3.04 CLEANUP AND REPAIR

- A. General: Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave interior areas broom clean.
1. Repair demolition performed in excess of that required. Return elements of construction and surfaces to remain to condition existing prior to start operations. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION 02 07 00

DIVISION 3

CONCRETE

SECTION 03 20 00

CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 DESCRIPTION

- A. Furnish, fabricate and install reinforcement and associated items required or indicated on the drawings for cast-in-place concrete, including, but not necessarily limited to, reinforcing steel bars, welded wire fabric, ties, and supports.
- B. Contractor shall note that new steel shall be uncoated ("black steel"). All steel, including welded wire fabric, shall be field-coated with primer to total surface coverage, inclusive of, but not limited to, top side, bottom side, ends, and all other exposed surfaces, in accordance with the material manufacturer's recommendations. Coverage shall be reviewed in the field by the Engineer prior to concrete placement; concrete placement may be delayed until primer coverage is determined to be acceptable by Engineer. Reference Section 2.01.

1.03 WORK SPECIFIED ELSEWHERE

- A. Furnishing and placement of inserts, anchorages, and other embedded items as specified in other sections.

1.04 QUALITY ASSURANCE

- A. Unless otherwise shown or specified, fabrication and placement of all concrete reinforcement and related items shall conform to the following codes and standards:
 - 1. American Concrete Institute, ACI 318, "Building Code Requirement for Reinforced Concrete."
 - 2. American Concrete Institute, ACI 315, "Manual of Standard Practice for Detailing Reinforced Concrete Structures."
 - 3. Concrete Reinforcing Steel Institute, "Manual of Standard Practice."

1.05 SUBMITTALS

- A. **Shop Drawings:** Submit shop drawings with mill certificates for fabrication, bending, and placement of concrete reinforcement all as may be required. Comply with the ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures." Show bar schedule, stirrup spacing, diagrams of bent bars, arrangements and assemblies, for the fabrication and placement of concrete reinforcement.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. **Delivery:** Deliver reinforcement to the Project Site bundled, tagged, and marked. Use metal tags indicating bar size, lengths, and other information corresponding to markings shown on placement diagrams.

Protection: Use all means necessary to protect concrete reinforcement before, during, and after installation and to protect the materials and installed work of all trades. Take all necessary precautions to maintain identification of fabricated bars after bundles are broken.

Storage: Store concrete reinforcement materials at the site to prevent damage and accumulation of dirt or excessive rust.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. **Reinforcing Bars:** ASTM A615, Grade 60, deformed.
- B. **Welded Wire Fabric:** ASTM A82 and ASTM A185.
- C. **Zinc-Rich Primer:** All steel, including welded wire fabric, shall be field-coated with primer to total surface coverage, inclusive of, but not limited to, top side, bottom side, ends, and all other exposed surfaces, in accordance with the material manufacturer's recommendations. Coverage shall be reviewed in the field by the Engineer prior to concrete placement; concrete placement may be delayed until primer coverage is determined to be acceptable by Engineer. Acceptable primer shall be MasterProtect P8100 AP, as manufactured by BASF Construction Chemicals, LLC, or approved equal. Reinforcing bars to be coated shall conform to Section 2.01-A.

- D. Bar Supports: Bar supports and spacing of same shall be per recommendations set forth by Chapter 3 of the "CRSI Manual of Standard Practice." Reinforcing bars supported from formwork shall rest on wire bar supports, or on bar supports made of dielectric material or other acceptable materials. Wire bar supports shall be coated with dielectric material, compatible with concrete, for a minimum distance of 2 inches from the point of contact with reinforcing bars.
- E. Tie Wire: Wire shall be 16 gauge or heavier, black-annealed. Reinforcing bars shall be tied with tie wire or other acceptable materials.
- F. For epoxy grouting reinforcing steel use the Hilti "HIT RE 500 System" supplied by Hilti Fastening Systems, "Dowel Fast" System by Powers Fasteners, or approved equal. Follow manufacturer's directions for installation and required surface preparation.

2.02 FABRICATION

- A. General Requirements: Fabricate reinforcing bars to conform to required shapes and dimensions, with fabrication to tolerances complying with CRSI Manual of Standard Practice. In case of fabricating errors, do not re-bend or straighten reinforcement in a manner that will injure or weaken the material.
- B. Unacceptable Workmanship: Reinforcement with any of the following defects will not be permitted in the work:
 - 1. Bar lengths, depths and bends exceeding specified fabrication tolerances.
 - 2. Bends or kinks not indicated on drawings or final shop drawings.
 - 3. Bars with reduced cross-section due to excessive rusting or other cause.

PART 3 - EXECUTION

3.01 PLACING REINFORCEMENT

- A. General Requirements:
 - 1. All reinforcing bars shall be placed in accordance with CRSI "Recommended Practice for Placing Reinforcing Bars."
 - 2. Bars shall be placed to the tolerance specified in ACI 318-99.
 - 3. Place all reinforcement according to the approved placement drawings. Use sufficient bar supports, tie anchors, additional reinforcing bars, if required, and other accessories to hold all bars securely in place.

- B. Concrete Coverage: Place reinforcement to obtain the minimum coverage specified on the drawings for concrete protection. Arrange, space, and securely tie bars and bar supports together with 16 gauge wire to hold reinforcement accurately in position during concrete placement operation. Set wire ties so that twisted ends are directed away from exposed concrete surfaces.
- C. Cleaning Reinforcement: Steel reinforcement, at the time concrete is placed around it, shall be free from loose rust and mill scale, oil, grease, paint, earth, ice and all coatings, which would reduce or destroy bond between steel and concrete. Clean reinforcement as necessary prior to, during, or after placement to achieve this result.

When bars project from construction joints, all cement mortar clinging to the bars from previous concreting shall be removed before the ensuing enveloping concrete is placed.

- D. All steel, including welded wire fabric, shall be field-coated with primer to total surface coverage, inclusive of, but not limited to, top side, bottom side, ends, and all other exposed surfaces, in accordance with the material manufacturer's recommendations. **Coverage shall be reviewed in the field by the Engineer prior to concrete placement; concrete placement may be delayed until primer coverage is determined to be acceptable by Engineer.**

3.02 REINFORCING BAR LAP SPLICES

- A. New slab reinforcing bars may be spliced to existing bars by lapped splices if adequate lengths of exposed existing bars are available. Provide reinforcement lap splices by placing bars in contact and tying with wire tightly. Comply with the requirements of Engineering Data Report Number 45, 'Tension Development and Lap Splice Lengths of Reinforcing Bars Under ACI 318-99' for minimum required length of bar for lap splices. Alternatively, the contractor can follow the values provided below for lap splice lengths based on the following guidelines:

LAP SPLICE LENGTHS FOR BARS IN TENSION (IN INCHES)

<u>Bar Size</u>	<u>Uncoated Reinforcement</u>
3	16
4	16
5	22
6	31
7	50
8	62

- Note 1. Based on Class B splice = $1.3 l_d$ (l_d = tensile development length)
Normal weight concrete
 f'_c = 4,000 psi min.
Grade 60 reinforcement
Concrete cover = 1.00 in. or greater
Bars have less than 12 in. concrete cast below them.
- Note 2. Lap splice lengths for steel based on concrete cover equal to or greater than 3 bar diameters and clear spacing between bars equal to or greater than 6 bar diameters.
- Note 3. For lightweight aggregate concrete, multiply the tabulated values by 1.3.

- B. Do not make splices at points of maximum stress if possible.
- C. Stagger top splices, and in horizontal wall reinforcement separate at least five feet longitudinally in alternate bars of opposite tiers.
- D. Stubs and dowels required to receive and engage subsequent work shall extend a sufficient length to develop the strength of the bar. Place dowel and stub bars in the forms and secure against displacement during the placing of concrete. Where stub steel and dowels extend through construction joints in walls, they shall be thoroughly cleaned of adhering particles of concrete, before continuing the placing of any subsequent concrete.
- E. Where splicing length is insufficient either additional concrete removal or mechanical bar splicing shall be implemented at the direction of the Engineer.

3.03 REINFORCING BAR MECHANICAL SPLICES

- A. Bars to be spliced by the mechanical splicing process shall be free of paint, oil, rust, scale or other foreign material. The splice shall be done in accordance with the manufacturer's recommendations which shall be submitted to the Engineer for approval.

The mechanical splice shall meet full tension requirement of 100% of the yield strength (f_y). The mechanical splices shall be performed using the Quick Wedge system manufactured by Erico Products, Inc. (800)248-2677, MBT Bar Lock System (800) 755-4888, or approved equal.

Test assemblies shall include the same bars, couplers and anchors. The same equipment shall be used to make these assemblies as to be used on the project.

- B. Unskilled operators must be trained and indoctrinated by an authorized representative of the system manufacturer. Upon satisfactory completion of the training, a certificate will be issued by the system manufacturer to show the splicer's name, badge, number/Social Security Number and date certified.
- C. Test splices should be made on the size, type and grade of rebar to be used in production. If a change of size, type of grade or rebar occurs, new test results should be obtained.

Minimum rebar deformation heights and spacing within the splice must conform to the requirements of ASTM A625, or ASTM A706 as appropriate. If minimum deformation heights and spacing requirements cannot be satisfied, the system's manufacturer may at its option offer and get an approval for alternate splicing procedure to meet the specified splicing strength requirements.

- D. The frequency of test splices shall be as follows:

First Fifty (50) - One Test
Next Fifty (50) - One Test
Thereafter, every one hundred (100) - One Test

The test splice shall be a SISTER SPLICE (removable splice made in-place and in sequence adjacent to production splices by the same operator and under same conditions.)

Separate test frequencies are not necessary to horizontal, vertical and diagonal splices.

- E. If any splice used for testing fails to meet the design code strength requirements, two splices in-place shall be cut from the previous lot and tested. If these sister splices fail, the contractor shall at his own expense, test as many splices as directed by the Engineer and re-splice all test and failed splices.

END OF SECTION 03 20 00

SECTION 03 30 00

CONCRETE WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section 032000 – Concrete Reinforcement
- C. Section 032400 – Fibrous Reinforcement in Concrete
- D. Section 033400 – Concrete repair using Trowel Applied Materials.

1.02 SUMMARY

- A. This Section specifies cast-in-place concrete, including formwork, mix design, placement procedures, and finishes.

1.03 SCOPE OF WORK

- A. This work shall consist of full/partial depth removal of concrete slabs at locations indicated on the drawings using jackhammers and placing new, low water-cementitious materials ratio, fiber-reinforced, air-entrained structural concrete according to the specifications.
- B. Work shall include the provision of tooled joints between new and existing concrete surfaces, and at designated locations and spacing as directed by the Engineer; Contractor shall verify placement of joints at time of concrete placement. **NOTE: Tooling of joints shall be performed at time of concrete placement; sawcutting of joints after concrete cures will not be allowed.**

1.04 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data for proprietary materials and items, including forming accessories, admixtures, patching compounds, bonding grout/agent, joint systems, curing compounds, and others as requested by Consultant.

- C. The Contractor shall submit trial mix proportion with compressive strength test results to the Consultant for approval.
- D. The Testing Agency shall submit test results of cylinders for each day's testing.
- E. The Contractor shall submit the proposed pouring sequence and construction joint layout for approval by the Consultant.
- F. Minutes of pre-construction conference.

1.05 QUALITY ASSURANCE:

- A. Codes and Standards: Comply with provisions of following codes, specifications, and standards, except where more stringent requirements are shown or specified:
 - 1. ACI 318, "Building Code Requirements for Structural Concrete," or AASHTO specifications.
- B. Materials and installed work may require testing and retesting at any time during progress of work. Retesting of rejected materials for installed work, shall be done at Contractor's expense.
- C. Pre-Construction Conference: Conduct conference at Project site to comply with requirements of Division 1 Section 01300 - Submittals, and Section 01400 - Quality Control Services.
- D. At the onset of the project start or at least 30 days prior to the first concrete pour, the contractor shall conduct a meeting to review the proposed mix designs and to discuss the required methods and procedures necessary to achieve the required concrete quality. The meeting will review requirements for submittals, status of coordinating work, and availability of materials. It will also establish preliminary work progress schedule and procedures for materials inspection, testing, and certifications. Representatives of each entity directly concerned with cast-in-place concrete should attend the meeting, including, but not limited to, the following:
 - 1. Contractor's superintendent
 - 2. Laboratory responsible for concrete design mixes
 - 3. Laboratory responsible for field quality control
 - 4. Ready-mix concrete producer
 - 5. Concrete subcontractor, if any
 - 6. Primary admixture manufacturers
 - 7. Consultant or Owner's representative

The minutes shall include a statement by the concrete contractor indicating that the proposed mix design and placing techniques will produce the concrete quality required by these specifications.

- E. Warranty: The Contractor (and applicable sub-contractors) shall provide a 2-year warranty for quality workmanship and materials to conform to the specifications.

1.06 APPLICATOR'S QUALIFICATIONS:

- A. The Contractor shall have a minimum of five years of experience in performing work similar to that shown in the drawings and specifications.
- B. The Contractor may be requested to submit a list of five projects in which similar work to that specified was successfully completed. This list shall contain the following for each of the five projects.
1. Project Name
 2. Owner of Project
 3. Owner's Representative, Address and Telephone Number
 4. Brief Description of Work
 5. Cost of Portion of Work Similar to that Specified in this Section
 6. Total Restoration Cost of Project
 7. Date of Completion

PART 2 - PRODUCTS

2.01 FORM MATERIALS:

- A. Forms for Exposed Finish Concrete: N/A
- B. Forms for Unexposed Finish Concrete: Plywood, lumber, metal, or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.
- C. Form Coatings: Provide commercial formulation form-coating compounds that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
- D. Form Ties: Factory-fabricated, adjustable-length, removable or snap-off metal form ties, designed to prevent form deflection and to prevent spalling concrete upon removal. Provide units that will leave no metal closer than 1-1/2 inches to exposed surface.
1. Provide ties that, when removed, will leave holes not larger than 1-inch diameter in concrete surface.

2.02 CONCRETE MATERIALS:

- A. Portland Cement: ASTM C 150, Type I, non air-entraining, of recent manufacture and free of lumps.
 - 1. Use one brand of cement throughout project unless otherwise acceptable to Consultant.
- B. Normal Weight Aggregates: ASTM C-33 and as herein specified. Provide aggregates from a single source for exposed concrete. Coarse aggregates shall be clean, sound crushed stone or crushed gravel. Maximum size of coarse aggregate shall be 1/2 inch. No chert shall be permitted.
- C. Water: Potable water.
- D. Sand: ASTM C-33. Sand shall be clean and sharp.
- E. Admixtures, General: Provide admixtures for concrete that are free from chloride ions.
- F. Air-Entraining Admixture: ASTM C-260, certified by manufacturer to be compatible with other required admixtures.
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Air-Mix" or "AEA-92," as manufactured by Euclid Chemical Co. (www.euclidchemical.com)
 - b. "Darex AEA" or "Daravair," as manufactured by W.R. Grace & Co. (www.na.graceconstruction.com)
 - c. "MasterAir VR 10" or "MasterAir AE 200," as manufactured by BASF Corp. Admixture Systems. (www.basf-admixtures.com)
 - d. "Sika AER," as manufactured by Sika Corp. (www.sikausa.com)
 - e. or approved equal.
- G. Water-Reducing Admixture: ASTM C 494, Type A.
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:

2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Eucon WR-75," "WAR-91" or "Eucon MR," as manufactured by Euclid Chemical Co. (www.euclidchemical.com)
 - b. "WRDA with Hycol," or "Daracem 65," as manufactured by W.R. Grace & Co. (www.na.graceconstruction.com)
 - c. "MasterPozzolith 32" or "MasterPolyheed 997," as manufactured by BASF Corp. Admixture Systems. (www.basf-admixtures.com).
 - d. "Plastocrete 161," as manufactured by Sika Corp. (www.sikausa.com)
 - e. or approved equal.

H. High-Range Water-Reducing Admixture (Super Plasticizer):
ASTM C 494, Type F or Type G.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Eucon 37," "Eucon 1037," or "Plastol 5000," as manufactured by Euclid Chemical Co. (www.euclidchemical.com)
 - b. "WRDA 19" or "Daracem 100," as manufactured by W.R. Grace & Co. (www.na.graceconstruction.com)
 - c. "MasterRheobuild 1000," as manufactured by BASF Corp. Admixture Systems. (www.basf-admixtures.com).
 - d. "Sikament 300," as manufactured by Sika Corp. (www.sikausa.com)
 - e. or approved equal.

I. Water-Reducing, Retarding Admixture: ASTM C 494, Type D.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Eucon Retarder 75," as manufactured by Euclid Chemical Co. (www.euclidchemical.com)
 - b. "Daratard-17," as manufactured by W.R. Grace & Co. (www.na.graceconstruction.com)

- c. "MasterSet R 100," as manufactured by BASF Corp. Admixture Systems. (www.basf-admixtures.com).
 - d. "Plastiment," as manufactured by Sika Corporation. (www.sikausa.com)
 - f. or approved equal.
- J. Certification: Written conformance to the above-mentioned requirements and the chloride ion content of admixtures will be required from the admixture manufacturer prior to mix design review by the Engineer.
- K. Fibrous Reinforcement:
- 1. Subject to compliance with requirements, provide fibrous reinforcement as per specification Section 03240.
- 2.03 RELATED MATERIALS:
- A. Moisture-Retaining Cover: Burlap and plastic complying with ASTM C 171.
 - B. Moist Curing: Curing shall be accomplished by wet curing only. A curing membrane shall only be used in floor areas if approved in writing by the Consultant or Owner's representative.
- 2.04 PROPORTIONING AND DESIGN OF MIXES
- A. Prepare design mixes for concrete by laboratory trial batch or field experience methods as specified in ACI 301, Section 4.2.3. Use an independent testing facility acceptable to the Consultant for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing.
 - B. Submit written reports to the Consultant of each proposed mix at least 15 days prior to start of work. Do not begin concrete production until proposed mix designs have been reviewed and approved by the Consultant. All mix designs shall be submitted on a Mix Design Submittal Form.
 - C. Design mix(es) to provide structural concrete with the following properties;
 - 1. 5000-psi, 28-day compressive strength, structural normal weight 145 pcf; W/C ratio, 0.40 maximum; fiber reinforcement as per Section 03240.

2.05 ADMIXTURES

- A. Use high-range water-reducing admixture (Super-plasticizer) in concrete for placement and workability.
- B. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content of 6.0% with a tolerance of plus or minus 1.0 percent.
- C. Use admixtures for water reduction and set control in strict compliance with manufacturer's directions.
- D. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:
 - 1. 3 inches plus or minus ½ inch, prior to addition of superplasticizing admixture.
 - 2. Not more than 8 inches final slump after addition of superplasticizing admixture.

2.06 CONCRETE MIXING

- A. Provide batch ticket for each batch discharged and used in work, indicating project identification name and number, date, mix type, mix time, quantity, and amount of water introduced.
- B. Ready-Mix Concrete: Comply with requirements of ASTM C 94, and as specified.
 - 1. When air temperature is between 85 deg F (30 deg C) and 90 deg F (32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.01. PREPARATION

- A. Remove concrete members as indicated on the drawing. The removal of concrete shall be performed using approved methods and prepare the concrete surfaces to receive new concrete as shown on plans and as directed by the engineer in the field.

3.02 FORMS

A. General:

1. The Contractor shall submit detailed drawings for formwork for examination by the Consultant. If such drawings are not satisfactory to the Consultant, the Contractor shall make such changes in them as may be required, but it is understood that the Consultant's examination of the drawings as submitted or corrected shall in no way relieve the Contractor of responsibility for obtaining satisfactory results.
2. All forms shall be so constructed and maintained that the finished concrete will be true to line and grade and of the shape and dimensions shown on the Plans. The forms shall be constructed so that they can be removed without injury to the concrete.
3. Forms shall be mortar-tight, sufficiently rigid to prevent distortion due to the wet concrete mix and other loads incident to construction operations, including vibration, and so constructed and maintained to prevent warping and opening of the joints due to shrinkage of the form material. Molding strips shall be placed in the corners of forms so as to produce beveled edges on permanently exposed concrete corners.
4. The interior of forms shall be treated with non-staining form oil before concrete is placed to prevent adhesion of the concrete to the form.
5. All lumber in contact with concrete shall be free from knotholes, loose knots, cracks, splits, warps or any other defects which would mark the appearance of the finished structure. Any lumber which had defects affecting its strength shall not be used.
6. In designing forms, concrete shall be considered as a liquid weighing 150 pounds per cubic foot for vertical loads and for computing the hydrostatic head for horizontal pressure. In addition, a live load allowance of 50 pounds per square foot shall be used on horizontal projections of surfaces. Forms shall be designed so that no member will develop a dead load deflection of more than 1/270th of the span.
7. Spreader blocks and non "stay-in-place" bracing shall be removed from forms before concrete is placed. In no case, shall any portion of wood be left in the concrete.

B. Forms for Permanently Exposed Surfaces:

1. Forms for concrete surfaces that will be permanently exposed to view shall be constructed of plywood or of metal panels. Wood or metal linings for forms shall be of such kind and quality, or shall be so treated or coated, that there will be no chemical deterioration or discoloration of the formed concrete surface. The type and condition of form linings, and the construction of the forms, shall be such that form surfaces will be even and uniform.
2. Plywood sheets less than five-eighth inch in thickness shall be placed against a solid wood backing of three-quarter inch sheathing. Plywood sheets five-eighth inch or more in thickness may be used without backing provided the forms are constructed to withstand pressure developed during placing of concrete without producing visible waviness between studs. Plywood sheets shall be placed so that joints are tight and with the long dimension horizontal.
3. Metal for forms shall be of such thickness that the forms will remain true to shape. Clamps, pins, or other connecting devices shall be such that they will hold the forms rigidly together in place and allow removal without injury to the concrete. Metal forms which do not present a smooth surface or line up properly shall not be used. All metal forms shall be kept free from rust, grease, or other foreign material which would discolor the concrete.
4. Form panels, either of wood or metal, shall be constructed and assembled so as to result in tight joints between the panels.

C. Form Anchorage:

1. Forms shall be securely tied together with approved rods, and braced in a substantial and unyielding manner. In general, tie rods shall be designed to also act as struts or spreader. Wood struts will not be permitted to remain in the concrete.
2. For concrete surfaces that will be permanently exposed to view, metal ties or anchorages within the forms shall be constructed so as to permit their removal to a depth of at least one and one-half inches from the face without injury to the concrete. The cavities on both sides of the concrete resulting from the removal of the end of form ties shall be filled with dry-pack Portland cement mortar having the same proportions of cement and sand as the mortar in the body of the concrete. The surface of the filling shall be left sound, smooth and even and shall match, insofar as practicable, the color of the surrounding concrete.
3. Devices which, when removed, will leave an opening entirely through the

concrete will not be permitted. Wire ties shall not be used. Any parts of metal supports or spacers for reinforcement that are left in place within one and one-half inches of an exposed surface of the concrete shall be of non-rusting metal or have a non-rusting coating. If such parts are galvanized, the weight of zinc coating shall average not less than two ounces per square foot of actual surface.

D. Inspection of Forms:

1. All dimensions of forms in place shall be carefully checked before concrete is placed. Immediately prior to placing concrete, any warping or bulging shall be corrected and all dirt, sawdust, shavings or other debris removed. In narrow walls where the bottom of the forms are otherwise inaccessible, the lower boards or panels shall be left loose on the back side so that extraneous material can be removed just prior to placing concrete.
2. If during placing of the concrete, the forms show signs of bulging or sagging, they shall be properly realigned and securely braced, and, if necessary to make proper correction, the portion of the concrete affected shall be removed.
3. When forms are unsatisfactory in any way, either before or during the placing of concrete, the placing shall be suspended until the defects are corrected.
4. If the forms develop any defects, such as bulging, sagging, leakage or irregular surfaces after the concrete has been poured, that portion of the work shall be removed, reconstructed or repaired as directed by the Consultant without additional compensation to the Contractor.

3.03 PLACING FINISHING AND CURING:

A. Bonding Grout:

1. After the existing concrete surface has been cleaned, it shall be uniformly saturated by pre-wetting for 2 hours minimum. Surface must be wet to saturated surface dry (SSD) condition, and any freestanding water shall be completely removed prior to placing the bonding grout. Immediately before placing concrete, a thin coating of bonding grout shall be scrubbed into the properly prepared surface of the existing concrete. Proper workmanship shall be exercised to insure that all existing surfaces receive a thorough, even coating and that no excess grout is permitted to collect in pockets. The rate of progress in applying grout shall be limited so that the grout does not become dry before it is covered with new concrete.

2. Bonding grout for patching concrete to existing concrete shall consist of equal parts by weight of Portland cement and sand mixed in a portable mechanical mixer with sufficient water to form a stiff slurry. The consistency of this slurry shall be such that it can be applied with a stiff brush or broom to the old concrete in a thin, even coating that will not run or puddle in low spots.
 3. Should the bonding grout dry before the concrete is placed, the Contractor will remove the dried grout and sandblast clean the grouted surface, at his expense, before placing fresh bonding grout.
 4. When the method of concrete removal includes hydro-milling or hydro-demolition, the requirements for the use of bonding grout may be waived. Prepared surfaces shall be clean and free of laitance, foreign material and any debris encountered during surface preparation. Do not allow cement to dry and re-adhere on the surfaces. The surface shall be uniformly saturated by wetting for 4 hours (min.) Surface will be saturated surface dry (SSD) condition, and any free standing water shall be completely removed prior to concrete placement. No free moisture or puddles on the surface will be permitted or accepted.
- B. Placing and finishing: After the bonding grout has been applied, concrete shall be placed, consolidated by vibration, and shall be finished by screening and bull floating to bring the finished surface to specified elevation. The surface shall then receive a light broom finish, as directed by the Engineer. The reinforcing steel shall have a minimum concrete cover as shown on plans. The finished concrete shall be suitably protected, until the completion of the required curing period. Provide tooled joints between new and existing concrete surfaces, and at designated locations and spacing as directed by the Engineer; Contractor shall verify placement of joints at time of concrete placement. **NOTE: Tooling of joints shall be performed at time of concrete placement; sawcutting of joints after concrete cures will not be allowed.**
- C. Curing: The recommendations of ACI 308 Standard Practice for Curing Concrete, shall be followed. When water is required to wet the surface of the newly placed concrete, it shall be applied as a fine spray so that it will not mark or pond on the surface. Except where otherwise specified, the curing period shall be at least 72 hours. If high early strength concrete is approved by the Consultant, the curing period may be reduced as directed by the Consultant. If fly ash or slag is approved in the mix by the Consultant, the curing time will be extended. Curing shall be accomplished by wet curing only. The curing and sealing compound shall only be used on floor and slab areas approved by the Consultant.

1. The surface of the newly poured concrete shall be covered with wetted burlap as soon as the concrete has hardened sufficiently to prevent marring of the surface. The burlap shall overlap six inches. At least two layers of wetted burlap shall be placed on the finished surface. The burlap shall be kept saturated by means of a mechanically operated sprinkling system. In place of the sprinkling system, two layers of burlap may be substituted for one layer of burlap and impermeable covering.

The burlap sheets shall be placed so that they are in contact with the vertical faces of concrete slabs after removal of slab forms, and that portion of the material in contact with those faces shall be kept saturated with water.

2. Membrane Curing Method. Membrane curing will not be permitted unless approved in writing by the Consultant. Concrete at these locations shall be cured by another method as specified above.

After the concrete has been finished, the surface shall be cured with the specified curing compound. The seal shall be maintained for the specified curing period. The vertical faces of concrete slabs shall, likewise, be sealed immediately after the forms are removed. This high solids curing and sealing compound shall be applied at a maximum coverage rate of 250 square feet per gallon. These applications shall be made with mechanical equipment. At locations where the coating is discontinuous or where pinholes show or where the coating is damaged due to any cause and on areas adjacent to sawed joints, immediately after sawing is completed, an additional coating of membrane curing compound shall be applied at the rate of one gallon per 250 square feet.

3. The Consultant may order curing by another method specified herein if unsatisfactory results are obtained with a curing compound. Prior to starting The Work, the Contractor shall have available, at the site of The Work, supply of one of the other approved curing materials sufficient for curing one day's production.
4. The Contractor's construction operations including the management of traffic, shall be such as to avoid damage to the coatings of curing compound for period of not less than the curing period specified. Any curing compound that is damaged or that peels from the concrete surface within the curing period specified, shall be repaired by the Contractor without delay and in an approved manner. No additional compensation will be allowed to the Contractor for performance of this work.

3.04 REMOVAL OF FORMS:

- A. General: Formwork may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 72 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form-removal operations, and provided curing and protection operations are maintained.

3.05 REUSE OF FORMS

- A. Clean and repair surfaces of forms to be reused in work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-coating compound as specified for new formwork.
- B. When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets. Do not use "patched" forms for exposed concrete surfaces except as acceptable to Consultant.

3.06 CONCRETE SURFACE REPAIRS

- A. Patching Defective Areas: Repair and patch defective areas with bonding grout or proprietary repair products immediately after removal of forms, when acceptable to Consultant.
 - 1. Cut out honeycomb, rock pockets, voids over 1/4 inch in any dimension, and holes left by tie rods and bolts, down to solid concrete but in no case to a depth of less than 1 inch. Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water, and brush-coat the area to be patched with specified bonding agent. Place patching mortar before bonding grout has dried.
 - 2. For exposed-to-view surfaces, blend white portland cement and standard portland cement so that, when dry, patching mortar will match surface texture of surrounding concrete. Provide test areas at inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar in place and strike-off slightly higher than surrounding surface.
- B. Repair of Concrete Surfaces: Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of Consultant. Surface defects, as such, include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets, fins and other projections on surface, and stains and other discolorations that cannot be removed by cleaning. Flush out form tie holes, fill with dry-pack mortar, or precast cement cone plugs secured in place with bonding agent.

1. Repair concealed formed surfaces, where possible, that contain defects that affect the durability of concrete. If defects cannot be repaired, remove and replace concrete.

3.07 QUALITY CONTROL TESTING DURING CONSTRUCTION

- A. General: The Owner will employ a testing laboratory to perform tests and to submit test reports.
- B. Sampling and testing for quality control during placement of concrete may include the following, as directed by Consultant.
- C. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with ASTM C 94.
 1. Slump: ASTM C 143; one test at point of discharge for each truck delivering the concrete; additional tests when concrete consistency seems to have changed.
 2. Air Content: ASTM C 173, volumetric method for lightweight or normal weight concrete; ASTM C 231 pressure method for normal weight concrete; one for each truck of air-entrained concrete.
 3. Concrete Temperature: Test hourly when air temperature is 40 deg F (4 deg C) and below, when 80 deg F (27 deg C) and above, and each time a set of compression test specimens is made.
 4. Compression Test Specimen: ASTM C 31; one set of 6 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory-cured test specimens except when field-cure test specimens are required.
 5. Compressive Strength Tests: ASTM C 39; one set for each day's pour exceeding 5 cu. yds. plus additional sets for each 50 cu. yds. more than the first 25 cu. yds. of each concrete class placed in any one day; one specimen tested at 3 days, two specimen tested at 7 days, 2 specimens tested at 28 days, and one specimen retained in reserve for later testing if required.
 6. When frequency of testing will provide fewer than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.

7. When total quantity of a given class of concrete is less than 50 cu. yds., Consultant may waive strength test if adequate evidence of satisfactory strength is provided.
 8. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.
 9. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive strength test results equal or exceed specified compressive strength, and no individual strength test result falls below specified compressive strength by more than 500 psi.
- D. Test results will be reported in writing to the Consultant, Ready-Mix Producer, and Contractor within 24 hours after tests. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for 7 day tests and 28 day tests.
- E. Nondestructive 3-day Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted but shall not be used as the sole basis for acceptance or rejection.
- F. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by Consultant. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed. Contractor shall pay for such tests when unacceptable concrete is verified.

END OF SECTION 03 30 00

SECTION 03 34 00

CONCRETE REPAIR USING TROWEL APPLIED MATERIALS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to this Section.
- B. Section 033000 – Concrete Work.

1.02 SCOPE OF WORK:

- A. This work shall consist of the removal of existing unsound concrete to required depth and the installation of a trowel applied, fast-setting cement mortar at locations indicated on drawings and/or at other locations designated by the Engineer.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. The fast-setting polymer repair mortar shall achieve a compressive strength of 5,000 psi in 28 days. The products approved under this section are as follows.
 - 1. Horizontal Repair Mortar:
 - a. “MasterEmaco T 310 CI” as manufactured by BASF Construction Chemicals, LLC (800) 433-9517.
 - b. “MasterEmaco S 440 CI” as manufactured by BASF Construction Chemicals, LLC (800) 433-9517.
 - c. “SikaTop 122 Plus” as manufactured by Sika Corporation (800) 933-7452.
 - d. “Concrete-Top Supreme” as manufactured by Euclid Chemical Company (800) 321-7628.
 - e. "MasterEmaco T 1060 Rapid Mortar" as manufactured by BASF Construction Chemicals, LLC (800) 433-9517.
 - f. or approved equal.

2. Vertical and Overhead Repair Mortar:
 - a. "MasterEmaco S 488 CI" as manufactured by BASF Construction Chemicals, LLC (800) 433-9517.
 - b. "SikaRepair SHB" as manufactured by Sika Corporation (800) 933-7452.
 - d. "Verticoat Supreme" as manufactured by Euclid Chemical Company (800) 321-7628.
 - e. "MasterEmaco N 425" as manufactured by BASF Construction Chemicals, LLC (800) 433-9517.
 - f. or approved equal.

PART 3 - EXECUTION

3.01 SURFACE PREPARATIONS:

- A. All loose and unsound concrete shall be removed with small chipping hammers. Remove concrete a minimum of 3/4" beyond the reinforcing steel.
- B. The surface shall be blown clean with compressed air to assure that all loose and hollow concrete is removed. The reinforcing steel shall be sandblasted to remove all rust.

3.02 PLACING, FINISHING AND CURING:

- A. Apply patching material as follows and in accordance with manufacturer's recommendations.
- B. Saturate the surface dry with water so that it maintains a dark gray color one half hour before placing.
- C. Scratch a base coat firmly into the dampened surface and apply the balance of the patch. Consolidate the mortar for density. For deep patches, add recommended filler and apply the material in lifts, allowing it to stiffen enough between lifts to support its own weight. For repairs over 4 inches deep, steel ties shall be provided to aid in weight support. Maximum filler addition to be 1 part filler to 2 parts mortar material by volume. The surface shall be troweled and brushed to match surrounding concrete.
- D. The finished patch shall be cured for at least 48 hours. Keep damp with water or coat with a water-based curing and sealing compound conforming to ASTM C1315 as recommended by the polymer repair mortar manufacturer.

- E. In hot weather, the surface shall be kept cool by shading. Use cold liquid for mixing. Work material rapidly since heat accelerates set. Cure immediately. In cold weather, do not make repair if temperature is expected to fall below freezing within 48 hours of placing. The patches must be kept at a minimum of 60 degrees F. for 72 hours for proper curing.

3.03 TESTING:

- A. The patched areas shall be sounded with a chain drag and/or hammer after 7 days after concrete placement; any hollowness detected shall be corrected by the Contractor by removing and replacing the patch at no extra cost to the Owner.

END OF SECTION 03 34 00

DIVISION 7
THERMAL AND
MOISTURE PROTECTION

SECTION 07 92 00

SEALANTS AND CAULKING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SCOPE OF WORK:

- A. Furnish labor, materials and equipment for sealing and caulking of cracks, construction or control joints and cove in the reinforced concrete structural slabs as shown on drawings or designated by the Consultant.

1.03 JOB CONDITIONS:

- A. The sealant shall be installed in floor cracks, construction and/or control joints in the areas shown on drawings or designated by the Consultant. In the case of repair of existing cracks that are sealed or filled with other materials, the existing sealant material shall be raked out and the exposed concrete cleaned by sandblasting or grinding at those locations designated for repair.

1.04 FULL RESPONSIBILITY:

- A. System manufacturer will have the full responsibility for: (1) Instructing the Contractor on the required configuration of joints and (2) Reviewing and approving tooled joints constructed as a part of surface preparation prior to installing the sealant.

1.05 GUARANTEE:

- A. The Contractor shall provide a single source performance guarantee that the joint system repaired, including related work in the slab installed by the Contractor, will not leak water or de-bond from adjacent concrete for a 2 year period starting from the date of substantial completion. Any repairs required during the guarantee period starting from the date of substantial completion shall be performed by the Contractor at no additional cost to the Owner.

1.06 APPLICATOR QUALIFICATIONS:

- A. The Contractor shall have a minimum of three years of experience in performing work similar to that shown in the drawings and specifications.
- B. The Contractor shall submit a list of five projects in which similar work to that specified hereinbefore was successfully completed. The list shall contain the following for each of the five projects:
 - 1. Project Name
 - 2. Owner of Project
 - 3. Owner's Representative, Address and Telephone Number
 - 4. Brief Description of Work
 - 5. Cost of Portion of Work Similar to that Specified in this Section
 - 6. Total Restoration Cost of Project
 - 7. Date of Completion of Work

The sum of the costs of the five projects provided shall be a minimum of \$50,000.

- C. A full time on-site supervisor shall be provided by the contractor for the duration of the sealant and caulking work. This supervisor shall have had a minimum of 2 years documented supervisory experience with the products to be used.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. The sealant to be used shall be non-sag two component polyurethane sealants of the chemically curing type containing no asphalt, coal tar, or plasticizers. The cove joint sealant shall comply with Federal Specification TT-S-00227E, Type II, Class A, Corporation of Consultants CRD-C-506-72; ASTM C-920-79, Type M, Grade NS, Class 25.

Approved Sealants are as follows:

- 1. "SikaFlex-2C-NS TG," as manufactured by Sika Corporation (www.sikausa.com)
 - 2. "Iso-Flex 881 NS Sealant" as manufactured by LymTal International, Inc. (www.lymtal.com)
 - 3. "THC-901" as manufactured by Tremco (www.tremcosealants.com)
 - 4. "MasterSeal NP 150" as manufactured by BASF Building Systems (www.buildingsystems.basf.com)
 - 5. or approved equal.
- B. The manufacturer of the sealant system used in this project shall share responsibility for all sealant work and joint preparation work in slab.

PART 3 - EXECUTION

3.01 TYPICAL SURFACE PREPARATION:

The Contractor shall either grind the surface of all cracks and construction joints designated for repair with sealant to the shape of 1/2" x 1/2" v-groove, or saw-cut a square 1/2" x 1/2" groove, grind sharp corner of groove and apply bond breaker to bottom horizontal surface. Edges of cracks or joints to be sealed shall be of sound concrete. Prior to installing sealant, surfaces shall be cleaned of foreign materials and debris, V-groove ground and primed.

3.02 RECORD OF SEALED CRACK AND JOINT LOCATIONS AND TYPES:

- A. After determining the cracks and joints to be sealed and the detail types required, the Contractor shall prepare scale shop drawings showing the sealed crack and/or joint locations and submit them to the Consultant for his approval. The Shop Drawings submitted shall be reviewed by the Consultant for the condition of the existing cracks/joints, the size/shape of the routed crack, and the type of detail selected.
- B. The Shop Drawings submitted shall be used as a record of the detail types used and the measured number of linear feet of each sealed crack. Quantities of work done on a unit price basis shall be recorded on the document and submitted to the Consultant with Request for Payment.

END OF SECTION 07 92 00

DIVISION 10

SPECIALTIES

SECTION 10 42 60

TEMPORARY CONSTRUCTION/TRAFFIC CONTROL SIGNAGE

PART 1 - GENERAL

1.01 SUMMARY

- A. Work Included: The Work of this Section shall include but not be limited to the following:
1. The fabrication, installation, and maintenance of all temporary construction/traffic control signage throughout construction. The size, wording, placement and configuration of the temporary signage shall be based upon the Contractors traffic control plan as approved by the Engineer and Owner. Final positioning of signage shall be coordinated in the field with the Engineer and Owner as necessary to assure proper vehicular and pedestrian flow in proximity or around active construction areas. As work progresses throughout the facility temporary signage shall be reused or reconfigured by the Contractor as appropriate as long as signage is in suitable condition for reuse. Additional signage shall be fabricated as required when needed.
 2. Work shall include verifying exact mounting locations, inclusive of height and maximizing visibility as approved by Engineer and Owner.
 3. Contractor shall coordinate the fabrication and installation of suitable temporary signage with all trades to direct vehicular and pedestrian traffic around active construction areas so that any unnecessary conflicts between construction and patrons of the garage are avoided.
 4. All temporary signage shall become the property of the New Haven Parking Authority upon completion of construction work unless the Contractor is specifically directed to legally dispose certain items. Cost of removal and disposal of said items shall be the Contractor's responsibility.
- B. Related Work Specified Elsewhere:
1. Drawings and general provisions of the contract, including General Conditions, Special Conditions and other Division 1 specification sections apply to this section.
 2. Section 015000 - Temporary Facilities

1.02 SUBMITTALS

A. Shop Drawings

1. Shop drawings: The Contractor shall submit shop drawings of all sign types including all message schedules and typical sections and mounting details to be approved prior to fabrication.
2. Complete alphabets, numbers, punctuation and symbols of the following typestyles shall be submitted to the Engineer for approval prior to fabrication.
3. Samples of each lettering type and word spacing are required for approval of color, and graphics. Compliance with all other requirements is the exclusive responsibility of the Contractor.
4. Scaled drawings of all temporary signage of each sign type shall be submitted for approval by the Engineer and Owner.

1.03 QUALITY ASSURANCE

- A. Comply with provisions of Division 1, and all other applicable Contract Documents.
- B. All materials shall be of first quality, and shall be carefully fabricated and approved by the Owner and Engineer.
- C. Minor deviations from the specifications may be acceptable in order to utilize a manufacturer's standard product only when such changes have been reviewed and approved by the Engineer and Owner based upon a review of submitted shop drawings.
- D. The Contractor shall be responsible for the quality of all materials and workmanship required for the execution of this contract, including the materials and workmanship of any firms or individuals who act as his subcontractors. The Contractor shall be responsible for providing subcontractors with complete and up-to-date drawings, specifications, graphic schedule and other information issued by the Engineer.
- E. Written dimensions on the drawings shall have precedence over scaled dimensions. Contractor shall field check, verify and be responsible for all dimensions shown by these drawings.

- F. The drawings in this bid package are for design intent only. The internal structure, dimensions and specifications for all items shall be indicated in the Contractor's shop drawings. Sign Contractor to engineer signs to proper level to withstand abuses of their environment.
- G. No fabrication, installation materials or procedures shall be used that will change the visual quality or in any manner have an adverse effect on existing materials and surfaces. The Contractor is responsible for the structural stability of all signs and mounting thereof. All damaged surfaces and materials shall be restored to their original condition and appearance by the Contractor upon removal of any and all temporary signage.
- H. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.
- I. Comply with all provisions of the Americans with Disabilities Act of 1990, and as amended, and all other applicable codes with regard to signage, as well as any and all subsequent appendices, addenda or revisions.

1.04 DELIVERY, STORAGE AND HANDLING REQUIREMENTS

- A. Deliver products to site under pertinent provisions of Division 1.
- B. Store and protect products under pertinent provisions of Division 1.
- C. Package signs, and properly label each, as to specific message or use.
- D. Store adhesive tape at ambient room temperatures

1.05 WARRANTY

- A. Not Applicable

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:

1. Sign-Lite, Inc., 6 Corporate Drive, North Haven, CT 06473,
tel: (203) 239-6799
2. Approved Equal

2.02 GRAPHIC REQUIREMENTS

- A. The typeface shall conform to the Type Specifications in this sign package. Type for signs shall match Adobe Type Library fonts (Adobe Systems Inc.) or approved equal.
- B. International symbols that are used are to be from the U.S. Department of Transportation current standards publication where applicable.
- C. All letters, regardless of material process, shall be executed in such a manner that all edges and corners of finished letterforms are true, clean and sharp photomechanical reproductions from professional typeset originals. Letterforms with rounded positive and negative corners, edge build-up or bleeding will not be accepted. Hand construction and hand letterforms will not be accepted.
- D. All letterforms shall be aligned to maintain a baseline parallel to the sign format.
- E. Letter size shall be determined by the height of the uppercase 'E' of the letterform.

2.03 MATERIALS

- A. Temporary signage shall consist of 10mm thick Corroplast corrugated exterior signboard. All text shall be 3M engineer grade Scotchlite reflective vinyl.
- B. Adhesives:
 1. Contractor shall use adhesives specifically designed for compatibility with the base materials and the desired adhesive strength in accordance with recommendations made by the manufacturer of the materials specified to be laminated or adhered. No adhesives shall fade, discolor or delaminate as a result of proximity to ultraviolet light source or heat shall be used. No adhesives shall change the color or deteriorate the materials to which they are applied. All adhesives shall be of a non-staining, non-yellowing quality and all visible joints shall be free from air bubbles and other defects. All adhesives shall be tested on site. All adhesives shall be indicated in the shop drawings.
 2. Surfaces on which signing is to be installed using adhesive shall be free of grease, oil, or any other residue.

3. Foam tape shall be 1/8" thick, high-density open cell double coated polyurethane foam VHB tape, manufactured by 3M Co., or approved equivalent.

2.04 FABRICATION

- A. All fabrication and installation shall be in accordance with the highest standards of the trade. All signs and components shall be complete and free from visual, structural and mechanical defects.
- B. Mechanically fastened signs or those fastened to preexisting substrates shall incorporate provisions for easy removal. All necessary mounting hardware or mounting adhesive shall be provided for proper temporary installation.
- C. All edges of signs to be ground smooth.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Clean and prepare surfaces to receive signage, according to manufacturer's written instructions for each particular substrate condition and as specified, as approved by Engineer.

3.02 PRE-INSTALLATION

- A. The location of signs shall be coordinated with the Engineer and Owner to determine final location of signs in the field. Location and placement of signage shall agree in general with locations depicted within the Contractor's traffic control plans as approved by the Engineer and Owner.
- B. The Contractor shall examine the areas and conditions under which work of this section will be performed and correct conditions detrimental to timely and proper completion of the work.

3.03 INSTALLATION

- A. Installation to be in compliance with manufacturer's instructions, unless otherwise specified.
- B. Sign units shall be installed level, plumb and at a height specified on drawings, unless otherwise indicated, with sign surfaces free from distortion or other defects in appearance.

- C. Any and all missing or damaged temporary construction/traffic control signage shall be repaired or replaced by the Contractor immediately upon request of the Engineer or Owner, particularly if missing or damaged signage presents or create unnecessary hazard to either vehicular or pedestrian traffic in proximity to active construction areas. All replacement signage required shall be a direct Contractor cost.
- D. Contractor to be responsible for the removal and legal disposal of all temporary construction/traffic control signage from the project site upon completion.

END OF SECTION 10 42 60

DIVISION 11

EQUIPMENT

SECTION 11 12 11

PARKING CONTROL SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. The extent of work referenced in this section is specified as follows:
1. Cloud-Based Parking Control System (PCS): Fully operational Parking Access and Revenue Control System (PARCS) (the “System”) for garages and gated lots including, but not limited to the following:
 - a. Facility Management System (FMS): Including, but not limited to, the Cloud-Based Server, Workstations, and Software.
 - 1) Central PARCS Operations: FMS must be capable of being used to manage multiple parking venues as indicated in Part II of this Section. See System Configuration below for information pertaining to the venues to be managed. FMS must be capable of being expanded to manage multiple parking venues as indicated in Part II of this Section.
 - 2) Automatic License Plate Recognition (ALPR) System: The FMS must accommodate ALPR System either by hosting ALPR System as a subsystem or by means of an electronic interface. See Section 11 12 35 for additional information.
 2. System Design: Includes all hardware and software design as necessary for a fully-functional system complying with the requirements of this Section.
 3. Comply with Section 11 12 15 requirements for the following:
 - a. Field coordination on site prior to installation through Final Completion.
 - b. PARCS Operational and technical training of Owner’s personnel.
 - c. Other Electrical Work for the complete parking control system.
- B. Cloud-based Parking Control System (PCS)
1. The intent is to have a cloud-based PCS and eliminate the need for on-premise servers and have all Integrated Parking Equipment (Section 11 12 15) communicate with the PCS via a secure, high-bandwidth, low-latency TCP/IP connections and still have equivalent facilitation to the premise-based hardware, workstations, and software controlled by the FMS specified this Section.
 - a. Proposal must clearly indicate how all FMS data will be securely isolated and accessed by the Owner. All project-specific data must remain exclusively owned and controlled by the Owner.
 - b. Proposal must clearly indicate the extent of required networking and internet access infrastructure required for optional system performance and what portions of same are included in the Proposal.

- c. Proposal must clearly indicate monthly or annual recurring charges associated with the cloud-based System services.
- d. Proposal must clearly indicate that industry-leading cloud services providers (e.g., Amazon Web Services (AWS), Microsoft Azure, etc.) shall be chosen as the foundation of the proposed cloud-based FMS solution.

1.2 RELATED WORK

- A. General: Comply with Section 11 12 15 requirements as applicable to the Summary above.

1.3 DEFINITIONS

- A. General: See Section 11 12 15.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Comply with Section 11 12 15 requirements.

1.5 SUBMITTALS

- A. General: Comply with Section 11 12 15 requirements.

1.6 QUALITY ASSURANCE

- A. General: Comply with Section 11 12 15 requirements.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with Section 11 12 15 requirements.

1.8 COORDINATION AND SCHEDULING

- A. General: Comply with Section 11 12 15 requirements.

1.9 LICENSING

- A. General: Comply with Section 11 12 15 requirements

1.10 WARRANTY

- A. General: Comply with Section 11 12 15 requirements.

1.11 MAINTENANCE AND SERVICE

- A. General: Comply with Section 11 12 15 requirements as applicable to the Summary above.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. System and associated equipment required in this Section must be provided by the same manufacturer as for the Integrated Parking Control Equipment provided per Section 11 12 15.

2.2 SYSTEM CONFIGURATION

A. General

1. The primary components of the PARCS upgrade solution must consist of a Facility Management System (FMS) and any interconnected (networked) system equipment required to maintain System operations as specified in this Section.
 - a. System must be microprocessor-based, online, and must run on embedded real-time firmware.
 - b. System must automatically collect parking data, monitor and report parking activity, control access, and process fee and permitholder transactions, and maintain connectivity and remote programming capabilities with all PARCS equipment.
 - c. System must be capable of maintaining operations across multiple facilities.
2. The System must consist of IBM-PC compatible (PC) software, computers, and peripherals.
 - a. System software must provide automatic facilities monitoring, supervision, and remote control of peripheral equipment from one or more selected locations.
 - b. At a minimum, primary System computers must consist of a Central Computer and a System Workstation. System communication with all peripheral equipment distributed across multiple facilities must be capable from either the Central Computer or the System Workstation via switching hardware. See the EQUIPMENT Article below for specific equipment requirements.
3. System Design
 - a. Minimum requirements for System design are as follows:
 - 1) Comply with ANSI and ISO standards.
 - 2) The System must be state-of-the-art.
 - 3) The System must have mass validation capabilities.
 - 4) System must accommodate remote System access and management by users via a Web-Access Portal (internet).
 - 5) The System must be compatible with all of the Authority's Pay by Cell (PbC) vendor applications, consisting of current applications as well as future applications that may be added and incorporated.
 - b. All software must be configurable in the field by qualified personnel.

- c. All time-dependent functions must utilize real-time clock synchronization with a single central system clock.
- d. Protect against interference or damage by lightning or other electrical influence; include fuse, over-voltage protection, flash-over protection, and line filter.
- e. System must accommodate the functionality of all Integrated Parking Control Equipment, including the existing Guidance System at the Air Rights Garage; See Section 11 12 15 for required Theory of Operation requirements.

B. Facility Management System (FMS)

- 1. General: The Facility Management System must be cloud-based with centralized connectivity to PARCS lane equipment, payment stations, management workstations, peripherals, and software. System software must provide automatic facilities monitoring, supervision, and remote control of peripheral equipment at all locations, multiple selected locations, or at a single location. The FMS must automatically collect data from peripheral equipment for revenue and activity reporting (as applicable), access and space control, ticket tracking, and equipment programming.
- 2. System Programming: The system must be completely PC programmable. Programming to all System equipment must be capable of being performed remotely through the cloud-based FMS software. All programming and/or reprogramming operations must be logged by the System. All System programming must be via user ID log-in and restricted by state-of-the-art password protection.
- 3. System Redundancy: The cloud-based FMS must support 3 levels of redundancy to support ongoing operation in case of a network or equipment failure. PARCS equipment must perform its redundancy workflow as the following:
 - a. Level 1 – Server level – All Equipment is online and up and running. If server connection failure occurs, the management of the PARCS equipment field devices must switch automatically to be managed by the parking system main controller.
 - b. Level 2 - Main controller level – PARCS field equipment is up and running and managed by the parking system main controller. All transactions and calculations are performed normally, including credit card acceptance. Credit card acceptance must depend on an online connection with a credit card server and credit card clearing house. Once the connection to the parking system server is re-established, all transaction data must pass to the FMS software.
 - c. Level 3 - Lane controlling level – Equipment must be managed in an offline mode. If a total network failure occurs, the management of the lane devices will be done independently by each equipment controller. Ticket dispensing, Fee calculations, cash transactions, and monthly entry & exit must perform normally. Once the connection to the main controller and the parking system server is re-established, all transaction data must pass to the FMS software.

4. FMS Subsystems: The FMS must be enabled with various Subsystems as required to provide the functionality required by this Section. At a minimum, the FMS must be enabled with the following subsystems*:
 - a. System Programming
 - b. System Configuration
 - c. System Monitoring (Access Control and/or Revenue Control as applicable).
 - d. Monitoring of Occupancy
 - e. Monitoring and Control of System Equipment
 - f. ALPR System

* See SUBSYSTEMS CONFIGURATION below for detailed requirements.
5. System Expandability: The FMS must be capable of having additional parking venues added to the management interface. The FMS must be capable of accommodating the future expansion of the Authority's existing network of facilities. See Part I of this Section for additional information.
6. System Access: FMS must accommodate no less than six (6) simultaneous administrative log-ins (users) per facility. All System access must be via user ID log-in and restricted by state-of-the-art password protection (strict security protocols).
 - a. FMS must provide password protection to restrict access to individual functions of the FMS and each subsystem to authorized users.
7. System Communications
 - a. FMS standard communication must operate using a computer network. See Section 11 12 15 for computer network specifications.
 - b. FMS remote access must operate using TCP/IP connection access and a web browser. See Section 11 12 15 for local web-access connection specifications.
8. Cloud-Based PCS/Client Mode: The FMS must-have modes for client operation.
9. GUI Menus: User interface by means of a series of graphical menus that must meet or exceed the following functional requirements:
 - a. Main System Menu: A Main System Menu must allow access to the Subsystem Menus. Distribute software functionality amongst the Subsystem Menus.
 - 1) At a minimum, the following options must be available on the Main System Menu:
 - a) Access, Counts, Revenue, Ticket Tracking, Reports, Utilities, Sign On/Off, and Help.
 - b) A Menu Bar must be displayed to facilitate point-and-click operation.
 - c) A Status Bar must display the current time, date, and the user currently signed onto the system.

- b. Subsystem Menus: Each subsystem indicated above must have a Subsystem Menu. Provide additional sub-menus as required to provide complete system access.
 - 1) At a minimum, the following Subsystem Menu functionality must allow authorized users to:
 - a) Set up readers, program access groups and holidays, set up alarms, read card transactions, search for cards, and access and reconfigure the cardholder database;
 - b) Access differential and non-resettable counts, monitor lanes in real-time, and remotely control lanes;
 - c) Set up sites, program devices, and read fee transactions from devices;
 - d) Set up system options and passwords, change the screen layout or search for a specific help topic.
 - c. Reporting Sub-Menus: Each Subsystem Menu must include a Report Sub-Menu or equivalent functionality to facilitate the reporting and exporting of system data. The FMS must allow the user to display several reports on-screen at one time, facilitating report comparisons.
 - 1) The standard database format of the FMS report generator must allow users to generate standard and customized reports.
 - a) User must be able to organize data by performing up to three sorts on the available fields.
 - b) User must be able to select the fields to be displayed in the report. The available fields must appear in a list, allowing the user to select and deselect fields.
 - c) User must be able to specify report parameters for one or more of the fields by entering a number range, selecting the option from a drop-down list, selecting the desired option button, or by entering the appropriate text.
 - d) The report must display on a screen to allow the user to reformat/modify the order of report information, enter a report title or accept the default, edit column headings, move column headings, delete columns, and modify the width of columns.
 - e) User must be able to specify the report output destination: screen, printer, or file. The user must be able to preview the report, scroll through report pages, zoom a page, send a report to the printer, export a report to a wide variety of spreadsheet, database, word processing, and ASCII formats, and send a report to an E-mail address.
10. System Notifications
- a. The FMS must include a Notifications Feature to alert programmed recipients via email or text when user-designated alerts are triggered by a Subsystem Menu or any automatic reporting feature within the System.

- b. Features must at a minimum:
 - 1) Use a designated email system to send pertinent information to management anywhere.
 - 2) Allow the owner to program email/text alerts to be sent to individuals or groups.
 - 3) Email reports automatically by programmable time of day and recurrence, whether daily, weekly, monthly, or yearly, and a recurrence period range or a number of occurrences.
 - 4) Allow a hierarchal organization structure of groups to tailor the Notification service to the parking facility's specific needs.
 - 5) Generate alarms programmed by the authorized user, including but not limited to canceled transactions, devices offline, back-out events with or without a ticket, and gate failures.
 - 6) Provide the administrator the ability to select a report format as HTML, PDF, or another format supported by the report generator.

C. Subsystems Configuration

- 1. General: All Subsystems enabled within the FMS must comply with the System Programming requirements indicated above. If the FMS designer proposes Subsystems in addition to those indicated below, Submittal requirements must include a detailed description of the Subsystem purpose and user accommodation.
- 2. System Programming Subsystem (SPS)
 - a. SPS must utilize the FMS designer's standard configuration.
- 3. System Configuration Subsystem (SCS)
 - a. SPS must utilize the FMS designer's standard configuration.
- 4. System Monitoring Subsystem (SMS)
 - a. Access Control
 - 1) The SMS must control access from one or more card readers, provide information on Cardholders (i.e. Lease Parkers), and display usage. The SMS must provide the following access control features (at a minimum):
 - a) Grant or deny cardholder access based on user-defined parameters,
 - b) Allow individual cards to be programmed to include a maximum of six access groups and one-holiday access group,
 - c) Provide the user the ability to set anti-passback by reader to None, True Soft, True Hard, Timed Soft, or Timed Hard,
 - d) Allow the user the ability to assign access groups, status, and mode for a single card, a group of cards, or all cards,

- e) Provide a quick search option of the cardholder database for a specific card number to view, add, and edit access cards and stored card information,
 - f) Allow the user the ability to customize the cardholder database by adding, editing, or deleting fields,
 - g) Provide the user the ability to modify the status of one card, a group of cards, or all cards,
 - h) Allow auto-synch to set all cards to a neutral status at a specified time for each day of the week,
 - i) Provide the user the ability to assign holiday access groups to cards for days designated by the facility as holidays.
- b. Revenue Control
- 1) The SMS must track all activities related to the collection of revenue from installed devices connected to the system. The SMS must provide the following revenue control features (at a minimum):
 - a) Provide transaction sorting, consolidated report generation, communication status monitoring, attendant/cashier sign-on/sign-off, and validation summary reporting.
 - b) Store all revenue transactional data within the FMS database for a complete historical audit trail and report generation.
 - c) Display real-time transaction details for all Entry and Exit Stations and for Pay-On-Foot Stations.
 - d) Provide device alarm monitoring that will let management select and view multiple levels of alarms.
 - e) Display alarms to alert management with on-screen flashing text or audible notification.
 - f) Track tickets with real-time access to outstanding and unreconciled ticket reports.
 - g) Allow the user to create macros to perform tasks such as starting and halting transaction readings, clearing reports, and ending communications.
 - 2) Credit Card Functionality
 - a) The SMS must facilitate unattended credit card use by patrons when used in conjunction with authorized devices and applications.
 - b) The functionality of this feature must allow for the control of access, programming of credit card rates, and the support of enhanced contract cardholder monthly and debit account credit card features including:
 - i. Transient credit card in/credit card out unless, on a location-by-location basis, the proposer persuades Owner that “credit card in” would be of no practical benefit.

- ii. Lease Contract cardholder pay-by-use with a credit card on file.
 - iii. Lease Contract cardholder debit replenishment with a credit card on file.
 - c) The features must allow authorized users to:
 - i. Add, edit and delete credit card access groups; program new, edit or delete existing rates; and program time schedules and readers that apply to the Group or credit card devices.
 - ii. Define the credit card parameters, types of cards allowed, and the maximum amount a contract patron can accumulate on the account.
 - iii. Set monthly due date preferences, including the day of the month, advance day of the month, and auto-recharge time.
 - iv. Program receipt header and footer for Universal Reader devices with receipt printer, installed in the exits of the parking facility.
 - v. Program user-definable welcome, thank you, approved, and denied display text messages on the Universal Reader display.
 - vi. Assign the Credit Card Access Group to patrons' cards in the cardholder database whose contract includes debit credit card transactions.
 - vii. View a list of transient credit card in/credit card out cards currently in the facility, including credit card type, hashed card number, and entry date and time.
- 5. Occupancy Monitoring Subsystem (OMS)
 - a. The OMS must control the equipment connected to the system and keep separate counts by designated patron type (transient, lease, etc.).
 - b. The OMS must provide the following features (at a minimum):
 - 1) Accurately display and monitor space management statistics.
 - 2) Display both differential counts and non-resettable transaction counts.
 - 3) Provide count by facility, lane, device, cardholder, and transient.
 - 4) Allow users to remotely control devices.
 - 5) Provide multiple programmable occupancy level alerts, producing action alarms.
 - 6) Display occupancy percentages, resettable by the time of day.
 - 7) Display and record real-time lane activity as it occurs.
 - 8) Allow users to customize alarm messages, program controls, automatically reverse lanes where applicable, and open or close lanes at a pre-programmed time of day using a scheduling interface integrated into the OMS.

- 9) Automatically illuminate facility traffic signs (FULL, OPEN, CLOSED, etc.) based on transient counts, cardholder counts, and or facility counts.]
6. System Equipment Monitoring and Control Subsystem (SEMCS)
 - a. General: The SEMCS must monitor and control all equipment connected to the System.
 - b. The SEMCS must provide the following monitoring features (at a minimum):
 - 1) Selection of Equipment: Allow selection of equipment to be monitored:
 - a) Equipment at one or all lanes.
 - b) Any individual device at one or all lanes.
 - c) One or all pay-on-foot stations.
 - d) One or all fee computers.
 - 2) Selection of Activity: Allow selection of activity to be monitored:
 - a) One Lane Only: At a minimum, monitor the following activities:
 - i. Presence B (Vehicle over B loop).
 - ii. Presence A (Vehicle over A loop).
 - iii. Ticket in Chute. (Ticket is issued. Maintain this status until the customer removes ticket.)
 - iv. Gate up. (Gate arm is in the up position.)
 - v. Frequency of B loop.
 - vi. Frequency of A loop.
 - vii. Sensitivity of B loop.
 - viii. Sensitivity of A loop.
 - ix. Total A input gate open counts.
 - x. Total B input gate open counts.
 - xi. Total remote input gate open counts.
 - xii. Monthly patrons disabled.
 - xiii. Transient patrons disabled.
 - xiv. Full sign on.
 - xv. Total illegal vehicles (tailgate).
 - xvi. Gate in over-ride (gate arm locked in up position.)
 - xvii. Safety edge (rebound) feature is on or off.
 - xviii. Next ticket number to be dispensed from ticket dispenser.
 - xix. Status of all devices in lane (include alarms, etc.).
 - b) All Lanes: At a minimum, monitor the following activities:
 - i. Lane number.
 - ii. Vehicle in lane.

- iii. Ticket in chute.
- iv. Gate arm up.
- v. Gate in over-ride (gate arm locked in up position).
- vi. Monthly patrons disabled.
- vii. Transient patrons disabled.
- viii. Lot full sign-on.
- ix. Lane online or offline.
- x. Operating mode of each lane.
- c) Pay-on-Foot Stations: At a minimum, monitor the following activities:
 - i. SEMCS must utilize the FMS designer's standard configuration.
- d) Fee Computers: At a minimum, monitor the following activities:
 - i. SEMCS must utilize the FMS designer's standard configuration.
- c. The SEMCS must provide the following control features (at a minimum):
 - 1) SEMCS must utilize the FMS designer's standard configuration.

2.3 EQUIPMENT

- A. General: This Article includes requirements of basic System equipment and equipment-related components. Auxiliary items required for the proper functioning of the System, whether mentioned or not, must be included. It is the manufacturer's responsibility to provide every component necessary for a complete functional System.
 - 1. All System equipment must be provisioned and configured to accommodate System functionality as described in the SYSTEM CONFIGURATION Article above.
 - 2. Reference applicable documents for PARCS equipment deployment details for each parking facility.
- B. Central FMS Computer System
 - 1. General: The Central FMS Computer System must reside on a cloud-based platform that can be accessed by multiple Workstations as required to meet the performance requirements of this Section.
 - a. Software: Design and configure the FMS software to meet or exceed the performance requirements of this Section while providing the functionality requirements indicated in the SYSTEM CONFIGURATION requirements above. Multiple software packages may be utilized to achieve System functionality. All software must utilize Graphical User Interface (GUI) technology.
 - b. Performance: All system power, components, and communications must be sized/rated to meet or exceed the performance requirements of this Section

without slowing the system response times or causing delays at the user interfaces. In addition to the Performance requirements indicated in Part I of this Section, the Central FMS Computer System must meet the following minimum requirements:

- 1) FMS Computer System must be capable of meeting the multi-tasking needs of all assigned System and Subsystem processing.
 - 2) Complete FMS backup in three hours or less.
2. The Cloud-based Central FMS Computer System must be capable of simultaneously linking to multiple computers running all necessary software and providing adequate data storage for the, including future growth and expansion, as described this Section. The Central FMS Computer System must be additionally equipped as follows:
- a. Data Storage
 - 1) Data must be stored as actual data and archived in a format readable by the report generator. Data must not be stored in report format.
 - 2) Data archiving system must ensure that the Central FMS Computer System always has the most recent 12 months of data. In addition, the archiving system must:
 - a) Utilize industry-standard media.
 - b) Archive or restore transaction database in one hour or less.
 - c) Feature redundancy so that a component failure will not yield a loss in data.
 - b. Performance Requirements: In addition to the Performance requirements indicated in Part I of this Section, the following specific requirements are applicable to the Central FMS Computer System:
 - 1) Accommodate password-protected access.
 - 2) Accommodate audible system alarms.

PART 3 - EXECUTION

3.1 SYSTEM DEPLOYMENT

- A. General: Comply with Part 3 requirements of Section 11 12 15 as applicable to the Work of this Section to provide a fully functional, tested and demonstrated Parking Control System inclusive of all Integrated Parking Control Equipment.

3.2 SCHEDULES

- A. General: Provide the following scheduled minimum quantities, unless a greater quantity is indicated on the Drawings.
- B. Parking Control Equipment Schedule

1. Reference applicable documents for the PARCS equipment plan matrix and diagrams showing planned PARCS Equipment Deployment. Final quantities to be procured will be determined by the Authority based on RFP Respondent's PARCS equipment and device pricing proposals for the same.

END OF SECTION 11 12 11

SECTION 11 12 15

INTEGRATED PARKING CONTROL EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. The extent of work referenced in this section is specified as follows:
1. Integrated Parking Control Equipment (IPCE): Fully operating parking control equipment integrated with the Project's Parking Access and Revenue Control System (PARCS) including, but not limited to the following:
 - a. Automatic Barrier Gates (with either straight or articulated gate arms).
 - b. Vehicle Detection Systems.
 - c. Access Control Units. (Proximity Card Readers)
 - d. License Plate Recognition System
 - e. Freestanding Device Housings and Stanton ("goosenecks").
 - f. Automatic Lane Stations.
 - g. Automatic Pay Stations (pay-on-foot).
 - h. Remote Ticket Validators.
 - i. Illuminated Signage Systems (including Illuminated Lane Controller and Facility Full Signs where applicable.)
 - j. Pedestrian Alert Systems.
 - k. VoIP Intercom System.
 - l. Fee Computers (i.e., the equivalency applicable for a cloud-based FMS).
 - m. Security Cameras and door control systems for Garage pedestrian entrances
 2. Furnishing of extra materials and Owner's operating stock as scheduled in Part III of this Section In accordance with Division 1 requirements.
 3. Equipment and Systems (as Subsystems) Design Requirements
- B. As required for compliance with the functioning requirements of this Section, parking control equipment devices must:
- i. Be state-of-the-art.
 - ii. Be fully integrated with the PARCS provided for the Project. See Section 11 12 11 for additional information.
 - iii. Utilize machine-readable crosswise barcode, swipe card (magnetic stripe) technology, 'smart' card (computer chip) near field (NF) technology, proximity card technology with 13 MHz, read-write capabilities, an LPR system and machine scanning of printed or electronically displayed barcode validations.
 - iv. Operate in on-line and off-line modes.
 - v. Comply with ANSI, ISO, and PCI standards.

- b. All devices must be configurable in the field by qualified personnel.
 - c. All time-dependent functions must utilize real-time clock synchronization with a single central system clock.
 - d. Protect against interference or damage by lightning or other electrical influence; include fuse, over-voltage protection, flash-over protection, and line filter.
 - 4. Field coordination on site prior to installation through Final Completion.
 - 5. IPCE Operational and Technical training of Owner's personnel.
 - 6. All electrical wiring required for IPCE control/data/communications and NOT indicated on the Electrical Drawings.
 - 7. All electrical wiring required for the IPCE power and NOT indicated on the Electrical Drawings.
 - 8. All electrical conduits required for the IPCE and NOT indicated on the Electrical Drawings.
 - B. Design Intent and Implementation: As described in SECTION 11-12-11 PART I General 1.1 Summary, B. Design Intent, and Implementation.
- 1.2 RELATED WORK
- A. Attachment of Equipment Components to Building
 - 1. Should any of the equipment provided in this Section require special or proprietary inserts or embeds, these must be furnished under this Section.
 - B. Electrical
 - 1. Power Supply: Refer to Division 26 Sections & Electrical Drawings for current characteristics of power supplied for the PCS and the IPCE including fused disconnect switches or circuit breakers for power supply line disconnect.
 - 2. Communications System: Refer to Division 27 Sections & Electrical Drawings for characteristics of data, voice, and audio-video communications supplied for the PCS/IPCE including pathways and cabling.
 - 3. Conduits and Wiring: As indicated below and as additionally shown on the Electrical Drawings, the Electrical Subcontractor must furnish and install IPCE electrical conduits and power wiring to the parking control equipment and empty conduits for PCS/IPCE control/data/communication wiring. Coordinate with the Electrical Subcontractor as required to ensure proper conduit/wire sizes and locations. Should the Electrical Drawings not include all electrical wiring and conduit required for the operation of the PCS and the IPCE, they must be supplied and installed by the IPCE Contractor at no additional cost to the Owner.
 - a. Typical Conduit Points to Equipment
 - i. 3 Conduits to the central lane device or junction box for each lane (1-power and 2-data/communication to dedicated Data Closet or Parking Office).

- ii. 3 Conduits between the gate and the central lane device (1-power and 2-data).
- iii. 2 Conduits between each stand-alone reader and the central lane device (1-power and 1-data).
- iv. 2 Conduits to pay-on-foot stations (1-power and 1-data to dedicated Data Closet or Parking Office).
- v. 1 Conduit between each loop and gate.
- vi. 2 Conduits to pay-on-foot stations (including future locations shown) (1-power and 1-data to dedicated Data Closet or Parking Office).
- vii. 1 Conduit between each illuminated "FULL" sign and the nearest gate.
- viii. 1 Conduit to each ILLUMINATED SIGNAGE SYSTEM ZONE from the Parking Office. All signs within an ILLUMINATED SIGNAGE SYSTEM ZONE must be interconnected via a conduit path.
- ix. 1 Conduit between each Pedestrian Alert System device at an exit and one conduit from one said device to the activating gate.
- b. Conduit Sizes
 - i. Minimum conduit size must be a minimum $\frac{3}{4}$ " U.N.O.
 - ii. Conduit runs to central lane junction boxes to dedicated Data Closet or Parking Office) must be a minimum 1" U.N.O.
 - iii. Conduits to loops must be $\frac{1}{2}$ ".
- C. License Plate Recognition (LPR) System: The Parking Control System must be complimented by an LPR system (subsystem). See Section 11 12 35 for additional information.

1.3 DEFINITIONS

- A. Automatic Lane Station: An electrically-powered automatic machine housed within a weatherproof cabinet enclosure that serves as a parker interface for the purposes of revenue control at a mechanically regulated vehicle lane.
- B. Automatic Pay-On-Foot Station: An electrically-powered automatic machine housed within a weatherproof cabinet enclosure that serves as a patron interface for the purposes of revenue control for patrons prior to returning to their vehicle.
- C. Redundant Lane Station: A Redundant Lane Station, is a lane station located adjacent to an Entrance Station or an Exit Station, that serves as an emergency backup unit in cases when the primary lanes station happens to fail. Redundant Lane Stations must additionally accommodate any lane-station-specific features required per this Section that are otherwise provided at the adjacent primary lane station.
- D. Barcode Validation: A visual method of representing data in a machine-readable form that is subsequently acknowledged by the PARCS as a valid system response. Two-dimensional matrix barcodes (a.k.a. Quick Response codes/QR-codes) must be utilized for this Project.

- E. Entrance Station: An Automatic Lane Station at an entry lane. Entrance Stations may include, but are not limited to, the following:
 - 1. Visual display.
 - 2. Audible prompts.
 - 3. Patron interface button(s).
 - 4. Intercom.
 - 5. Proximity card reader.
 - 6. Barcode Scanner.
 - 7. Ticket dispenser with integral printer.
 - 8. Credit card/debit card reader.
 - 9. See Part II of this Section for Entrance Station requirements specific to this project.
- F. Exit Station: An Automatic Lane Station at an exit lane. Exit Stations may include, but are not limited to, the following:
 - 1. Visual display.
 - 2. Audible prompts.
 - 3. Patron interface button(s).
 - 4. Intercom.
 - 5. Proximity card reader.
 - 6. Barcode Scanner.
 - 7. Exit verifier.
 - 8. Credit card/debit card reader.
 - 9. See Part II of this Section for Exit Station requirements specific to this project.
- G. Facility Management System: The Cloud-Based Central FMS System software, depending on Section 11-12-11 requirements, controls all integrated parking control equipment (specified in this Section) from the same location (Local Operations), from a remote location (Remote Operations), or through on-line service accessed via the Internet.
 - 1. The FMS must provide accommodation to fully-support LPR System operations. See Section 11 12 11 for additional information.
- H. License Plate Recognition System: A system using hardware and software to record (read/capture) a vehicle's license plate number and State of origin using image technology and optical character recognition (OCR). See Section 11 12 35 for additional information.
- I. FMS Access Workstations: The Cloud-Base Central FMS System user interface shall be accessible via any desktop personal computer (PC) workstation located on-premise, via a portable PC tablet, and via any properly authorized mobile cellular device.

- J. Parker: A patron that is navigating or has navigated a vehicle through the parking control equipment environment.
- K. Patron: Any user of the parking control equipment.
- L. Personal Computer (PC): A multi-purpose computer designed for individual use by an end user. All PC units provided in this Section must have architecture and functionality that complies with current industry standards and allows for complete compatibility with all other computers in the FMS provided in this Section.
- M. Post-Capture Image: Image obtained when LPR cameras are placed in a position to capture vehicle and license plate images immediately after the LPN is validated and the patron either takes a ticket (credential) or presents another valid credential at a facility entry lane.
- N. Pre-Capture Image: Image obtained when LPR cameras are placed in a position to capture vehicle and license plate images before the patron presents their parking credential.
- O. Satisfactory Station Payment: For the purposes of this Section, the term “Satisfactory Station Payment” includes the following:
 - 1. Credit/Debit Card Payment: For locations scheduled to accept credit/debit card payments, the patron will insert the desired card into a parking control unit configured to accept such payment. “Satisfactory Station Payment” is achieved when the subject card has been verified for the transaction.
 - 2. Cash Payment: For locations scheduled to accept cash payment, the patron will insert the cash into a parking control unit configured to accept such payment. “Satisfactory Station Payment” is achieved when sufficient cash has been inserted into the unit.
- P. Web-Access Portal: A System user interface accessed via a compatible Web-enabled device.
- Q. List of abbreviations:
 - 1. PCS: Parking Control System
 - 2. FMS: Facility Management System
 - 3. LPN: License Plate Number
 - 4. LPR: License Plate Recognition
 - 5. IPCE: Integrated Parking Control Equipment
 - 6. VoIP: Voice over Internet Protocol

1.4 PROJECT DESCRIPTION

- A. General

1. The PCS and the IPCE will be used to control the Parking Control Equipment in the designated garages and lots as noted in the applicable documents.
2. The following is a general description of the requested system components.
 - i. The Authority requires a gated operation in all the garages and most of the surface lots except as noted.
 - ii. The Authority requires a closed hosted FMS and Database system.
 - iii. The Authority requires an LRP system except where physically not feasible for permit parkers. Vendor must provide a backup for situations where LRP fails or cannot be implemented. However, the system must continue to accommodate several local agency badges including YNH and Gateway Community College until they can be eliminated.
 - iv. For transient parkers, the Authority would encourage use of LPR integrated with the Park New Haven APP but supplemented with either Barcode or QR code.
 - v. The Authority requires that cash not be accepted in lane except at lanes with Cashier booths.
 - vi. The Authority requires that the designated existing booths be retained and refurbished as described in the applicable documents.
 - vii. The Authority requires that the PARCS system proves a validation solution that enables third-party entities to virtually manage validations for their customers and record the activity for billing purposes.
 - viii. The Authority has expressed a desire for the PARCs system to provide a “white label” internal reservation system and provide costs related to this service.
 - ix. The Authority desires the following additional features:
 - a) Pay-by-Cellphone and mobile payment apps (Google Wallet, Apple Pay, etc.)
 - b) Mobile phone as access credentials
 - c) Aggressive promotion of pre-sale event parking
 - d) Lease customer account management software
 - e) Real-time and historical parking facility performance analytics
 - f) Dynamic pricing
 - g) Integration with City’s enforcement software.
3. The PCS and the IPCE that will be used to eventually control the new Parking Control Equipment to be installed and deployed in parking facilities are further detailed in the applicable documents.
4. The PCS and the IPCE will be used for transient, lease, and event parking.

- a. The transient parkers will either present a credit card at entry or be issued a parking ticket, satisfy the fee payment requirement in the exit lanes or at free standing pay stations by using credit/debit card, cash, or validation. and will surrender the ticket upon exit, unless a credit card was presented at the entry and exit lane for a ticketless transaction). The tickets may use either bar-code or QR code-based on the vendor's preference.
 - i. Vendors may also utilize LPR for transient parkers in either ticketless or ticket- based operation. If LPR, transient parking payment will also be integrated with the Park New Haven APP.
 - ii. For LPR-designated lanes, the LPR System will obtain a post-capture image of the vehicles license plate number.
 - b. The lease parkers (i.e. monthly permit patrons, Yale New Haven Hospital "YNHH", Gateway College "GCC" and other user groups etc.) will utilize either LPR as a primary credential but will continue to use a physical credential such as a prox card for entry to, and exit from the parking facility. ID badges from YNHH and GCC must be accommodated until they are phased out.
 - c. Event parkers will either present a credit card, cash, or a valid pre-paid parking reservation credential at the entry lane, a cashier attendant deployed at the entry lane during special events will process special event payments made with credit cards and cash using fee computer or a cellphone-based cashiering FMS module and print an event parking ticket and receipt using a portable printer device. When any Pre-Paid Special Event Parking Reservation credentials are presented during special events, the attendant cashier will scan to verify the bar-coded reservation credential and print an event parking ticket and receipt using a portable printer device. All event parkers will surrender the paid special event ticket issued by the cashier attendant at the entry to be scanned or inserted into the exit lane verifier station in order to exit the parking facility.
- B. Patron Access: Patron access interface with the IPCE must include:
- 1. Tickets: Tickets will be issued to the patron upon entry to the facility and will be scanned for verification of payment upon exit.
 - 2. Credit Cards: A valid credit card may be used as a "ticketless" credential ("Credit Card-in/Credit Card out").
 - 3. Cards: Plastic proximity cards with read-write capabilities for lease parking use. The card will be issued to the patron by prior arrangement with the Owner.
 - 4. License Plate Numbers (LPN): A valid LPN may be used as a "ticketless" credential.
 - 5. Smart Phone QR Code Scan in/out.
 - 6. Validations: Including:
 - a. Web validation for remote ticket validation by Tenants and/or businesses.

- b. Remote ticket encoders/validators.
- C. Fee Payment
 - 1. Transient Parking: Pay at Exit Lane Stations or at Automatic Pay-on-Foot Stations.
 - 2. Lease Parking: Prepaid monthly or per Owner's arrangement.
 - 3. Special Event Parking: Pay at Entrance Lane Station, or pay the cashier attendants to be stationed in the attendant booths that will be retained.
 - 4. Smart Phone QR Code Scan in/out.
 - 5. Validations: Including:
 - a. Web validation for remote ticket validation by Tenants and/or businesses.
 - b. Remote ticket encoders/validators.
- D. LPR System: Provide the following LPN matching accuracy and accuracy enhancement requirements:
 - 1. Based on the non-exception LPN reads/captures provided by the ALPRS, the FMS must maintain minimum LPN matching success rates per the following factors:
 - a. N-Factor: ALPRS reads all LPN characters correctly: **[90-percent.]**
 - b. N1-Factor: ALPRS reads all but one LPN character correctly: **[94-percent.]**
 - c. N2-Factor: ALPRS reads all but two LPN characters correctly: **[98-percent.]**Note: Stacked characters are to be excluded from accuracy determinations.
 - 2. FMS must allow operator to either set the System to use N, N1, or N2-Factor levels, or select an automated configuration option.
 - 3. See Section 11 12 35 for related LPR accuracy requirements and applicable exceptions.
 - 4. See Part 3 of this Section for testing related to LPN Matching Accuracy.
- E. Theory of Operation: Various modes of interfacing with the PARCS/IPCE are included below. The listing is generic in nature. For applicability to any single facility, see clarifications in Part 3 of this document.
 - 1. General
 - a. Basic descriptions of System operations are indicated below for the purposes of expressing Design Intent for particular aspects of operations and shall not be construed as a comprehensive listing of overall System operational functionality. Manufacturer/Installer must demonstrate compliance to the Design Intent via the Submittals for this Section or must indicate where and/or how equivalent facilitation is being provided.
 - b. Where an aspect of System operations is not addressed this Section, it must be construed as a requirement for providing the Manufacturer/Installer's recommended standard for System operations.
 - 2. Entrance Lanes

- a. Inactive Lane: The LPR Camera functionality and the Entrance Station will not be operative if a vehicle is not present in the lane.
3. Entrance Lanes
- a. Transient Parker Entrance Use upon Lane Activation
 - i. The Entrance Station will visually instruct the user to take a ticket, insert a credit card, or scan an entry code.
 - ii. A credit card or a valid barcode/QR code validation may be presented, or the ticket dispenser will issue one (1) and only one (1) ticket to each patron when the patron waves at the hands-free sensor device.
 - a) Should a patron wish to use “credit card in”, the patron will insert or hold their credit card into, or position near the card reader. If a credit card is valid, the card will be returned to the patron and the entry gate will be activated and the gate arm will rise to allow the vehicle passage into the parking area. If a credit card is invalid, the card will be returned to the patron, the display must read “INVALID” and the lane equipment will reset.
 - b) Should a patron wish to scan a barcode/QR code validation from a paper print or from a mobile phone, the patron will place the barcode image underneath the optical scanner. Should the barcode validation be valid, the entry gate will be activated, and the gate arm will rise to allow the vehicle passage into the parking area. Should the barcode validation be invalid, the display must read “INVALID” and the lane equipment will reset.
 - c) Should a patron choose to take a ticket, skip to “Through-Entrance Operations” below.
 - iii. If a vehicle does not enter the parking area after the system raises the entrance gate, the gate will return to the down position within a preset period of time. Once the gate is down, the Entrance Station and all lane equipment will reset to issue a valid ticket or accept a lease parker card/transponder from the next patron. If the parker requires assistance at this point, the necessary steps to correct the situation shall be determined by the use of the push-to-call intercom system.
 - b. Lease (Monthly) Parker Entrance Use upon Lane Activation
 - i. Pre-Capture LPN Image Entrance Lanes: If a valid LPN is captured, the LPN is associated with a valid permit account, and the entry/exit sequence is correct the gate will raise automatically. If the LPN is not associated with a permit account or a valid LPN is not captured, the Entrance Station’s ticket dispenser and all of the in-lane readers will be activated.
 - ii. If the monthly (lease patrons/employees) card is valid and the entry/exit sequence is correct, the gate will be activated, and the gate arm will rise to allow passage of the vehicle into the facility. The ticket dispenser will

- not be operative if the exit gate has been raised using a lease card/transponder until the gate has closed and reset the equipment.
- iii. If the monthly lease card I.D. number fails validity or anti-pass-back checks, the card will be rejected the FMS will log the occurrence with date, time, card reader location, user I.D. number, and type of invalid access. The gate will not be activated (the gate arm will not rise to allow passage of the vehicle through the lane) and the in-lane display must read “INVALID”. The Entrance Station and all lane equipment will reset for processing the next vehicle and the necessary steps to correct the situation shall be determined by the use of the push-to-call intercom system.
- c. Through-Entrance Operations
 - i. Entrance Station will prompt the parker to request a ticket.
 - ii. Once a parker requests a ticket, the Entrance Station will print the ticket, and a ticket will be presented to the parker.
 - iii. Upon pulling a ticket, a valid credit card read, a valid lease parkers access, and/or a valid employee card read, the gate will be opened automatically.
 - iv. When the vehicle passes over the gate inductive loop, the gate will close, and the Entrance Station and all lane equipment will reset to repeat the operation for the next vehicle.
 - v. In the event of a System malfunction, the necessary steps to correct the situation shall be determined by the parker using of the push-to-call intercom system for assistance from remote NHPA staff.
4. Dedicated Access Lanes – Lease Parker Use Only (Entry or Exit Lanes)
- a. Lane Activation
 - i. The entering vehicle will be automatically detected as it passes over the inductive loop in the pavement and the card readers and LPR system will be activated.
 - b. Lease (Monthly) Parker Use upon Lane Activation
 - i. The patron will wave his/her proximity card at the card reader will automatically identify the vehicle as belonging to a lease parker. LPR System will automatically identify the vehicle.
 - ii. If the lease card or LPN is valid and the entry/exit sequence is correct, the gate will be activated, and the gate arm will rise to allow passage of the vehicle into the facility.
 - iii. When the vehicle passes over the gate inductive loop, the gate will close, and the lane equipment will reset to repeat the operation for the next vehicle.
 - iv. If the I.D. number fails validity or anti-passback checks, the card will be rejected, the FMS will log the occurrence with date, time, card/LPN reader location, user I.D. number, and type of invalid access. The gate will not be activated (the gate arm will not rise to allow passage of the

vehicle through the lane), and the in-lane display must read “INVALID”. The lane equipment will reset for processing the next vehicle and the necessary steps to correct the situation shall be determined staff.

5. Exit Lanes

- a. Inactive Lane: The LPR camera functionality and the Exit Station will not be operative if a vehicle is not present in the lane.
- b. Pre-Capture LPN Image Lane Activation
 - i. The exiting vehicle will be automatically detected as it passes over the inductive loop and the Exit Station will be activated.
 - a) The LPR System will be activated by the Entrance Station and the vehicle’s LPN will be captured.
 - ii. The Exit Station’s ticket reader will not be operative if the exit gate has been raised by the use of a permit **card/LPN** until the gate has closed and reset the equipment.
 - iii. If the parker finds none of the above options satisfactory or in the event of a System malfunction, the necessary steps to correct the situation shall be determined by use of the intercom system.
- c. Transient Parker Exit Use upon Lane Activation
 - i. The Exit Station will visually instruct the user to scan their ticket by holding it near an optical scanner, or for the user to insert into or hold their credit card near the reader,
 - a) If a ticket is optically scanned by the reader, skip to “Ticket Functionality” below).
 - b) If a credit/debit card is then inserted into or held near the reader, skip to “Payment Operations” below.
 - c) If a valid barcode validation is then presented to the scanner, skip to “Payment Operations” below.
 - ii. Ticket Functionality
 - a) Should a pre-pay, validated, or free exit ticket be used, and the LPN matches the entry ticket/LPN correlation, the Exit Station will automatically read the pre-pay, validation, or free exit ticket and automatically open the exit gate.
 - b) Should an unpaid ticket be used, the patron will be informed of the amount of the unpaid fee. Once informed of the parking fee amount, the patron will be allowed to pay with an approved method.
 - c) Should an invalid or unreadable ticket be used, or the LPN not match the entry ticket/ LPN correlation, the ticket will be rejected, and the FMS will log the occurrence with date, time, card/tag reader location, ticket number/last four digits of card number and type of invalid access. The gate will not be activated (the gate arm will not rise to allow passage of the vehicle through

the lane) and the in-lane display must read “INVALID”. The Exit Station and all lane equipment will reset for processing the next vehicle and the necessary steps to correct the situation shall be determined by the use of the push-to-call intercom system for assistance from remote NHPA staff.

- d) However, upon the ticket being rejected, as noted above, the Patron shall be allowed to enter the applicable license plate number for opening the exit gate; for this function to be acceptable, the entered license plate number must match the vehicle’s plate number.

iii. Payment Operations

- a) See the definition of “Satisfactory Station Payment” above for information pertaining to patron options for completing the payment process.
- b) Should the patron complete the payment process with an approved method, skip to “Through-Exit Operations” below.
- c) Should the method of payment selected by the patron prove invalid or the LPN not match the entry ticket/LPN correlation, the gate will not be activated (the gate arm will not rise to allow passage of the vehicle through the lane) and the in-lane display must read “INVALID”. The Exit Station and all lane equipment will reset for processing the next vehicle and the necessary steps to correct the situation shall be determined by the use of the push-to-call intercom system for assistance from remote NHPA staff.
- d) Should a patron wish to scan a barcode validation (“coupon”) from a paper print or from a mobile phone prior to making payment, the patron will place the barcode image underneath the optical scanner. Should the barcode validation be valid, the fee will be re-calculated based on the coupon amount, and the patron will be informed of the amount of unpaid fee if any. Once informed of the parking fee amount, the patron shall pay with an approved method.
- e) Validations: Should a patron wish to have the fee recalculated by use of a validation prior to making payment, the patron will either scan a barcode/QR validation (“coupon”) or insert a “chaser ticket” validation into the reader. Should the patron wish to use a barcode validation from a paper print or from a mobile phone, the patron will place the barcode image underneath the optical scanner.
 - i. Should the validation be valid, the fee will be re-calculated based upon the coupon amount, and the patron will be informed of the amount of unpaid fee if any. Once informed of the parking fee amount, the patron shall pay with an

- approved method. Upon Satisfactory Station Payment, the exit gate will be opened automatically.
- ii. Should the validation be invalid, the display must read “INVALID”. The Exit Station will display the last valid fee calculation and the patron must be directed to either insert payment or use the intercom to determine the necessary steps to correct the situation.
 - iii. If the transaction is canceled after the coupon was processed, the entry ticket must be re-encoded to include the discount information, and the canceled ticket returned to the patron.
 - f) If no action is taken by the patron after a preset period, the gate will not be activated (the gate arm will not rise to allow passage of the vehicle through the lane) and the Exit Station and all lane equipment will reset for processing the next vehicle and the necessary steps to correct the situation shall be determined by use of the intercom system.
- iv. Transaction Completion
- a) Upon completing the payment process, the exit gate will be opened automatically. If the transaction is canceled after a validation was processed, the entry ticket must be re-encoded to include the discount information, and the canceled ticket returned to the patron.
 - b) Patron will be offered the option of a printed receipt.
- d. Lease (Monthly) Parker Exit Use Upon Lane Activation
- i. Pre-Capture LPN Image Exit Lanes: If a valid LPN is captured, the LPN is associated with a valid permit account, and the entry/exit sequence is correct the gate will raise automatically. If the LPN is not associated with a permit account or a valid LPN is not captured, the Entrance Station’s ticket/card reader and all of the in-lane readers will be activated.
 - ii. The patron will wave his/her proximity card at the card reader or the LPR System will automatically identify the vehicle].
 - iii. If the **card/LPN** is valid and the entry/exit sequence is correct, skip to “Through-Exit Operations” below.
 - iv. If the I.D. number fails the validity check, or if the entry/exit sequence is incorrect, the card/LPN will be rejected and the FMS will log the occurrence with the date, time, card/LPN reader location, user I.D. number, and type of invalid access. The gate will not be activated (the gate arm will not rise to allow passage of the vehicle through the lane) and the in-lane reader display must read “INVALID”. The Exit Station and all lane equipment will reset for processing the next vehicle and the

necessary steps to correct the situation shall be determined by the use of the push-to-call intercom system for assistance from remote staff.

- e. Through-Exit Operations
 - i. Upon Satisfactory Station Payment and/or valid lease patron access, the gate will be opened automatically.
 - ii. When the vehicle passes over the gate inductive loop, the gate will close, and the lane will reset to repeat the operation for the next vehicle.
- 6. Exit Lanes – Free Out
 - a. The exiting vehicle will be automatically detected as it passes over the inductive loop in the pavement and the gate will be activated (the gate arm will rise to allow passage of the vehicle through the lane).
 - b. When the vehicle passes over the gate inductive loop, the gate will close, and the exit lane equipment will reset to repeat the operation for the next vehicle.
- 7. Exit Lanes with Pedestrian Alert System
 - a. Exit lane operation must be as described above. The Pedestrian Alert System must operate as long as the gate is not in the fully down position.
- 8. Automatic Pay-on-Foot Station (POFS) – Transient Parkers
 - a. POFS Activation
 - i. The patron will proceed to a POFS prior to retrieving their vehicle. POFS must be equipped with a motion detector that activates the POFS when the presence of movement is detected. POFS must be idle during periods of inactivity.
 - ii. Movement must activate the voice announcement, graphics display, and enable reader functions.
 - b. POFS Use Upon Activation
 - i. The POFS will audibly instruct the user to insert a validated ticket or credit card. If a ticket is then inserted into the reader, it will be processed by the FMS as described below. If a credit/debit card is used, skip to “Payment Operations” below.
 - ii. Ticket Functionality
 - a) Should a pre-pay, validated, or free exit ticket is used, the POFS will automatically read the pre-pay, validation or free exit ticket and the ticket must be returned to the patron to be used to exit the facility using an in-lane Exit Station.
 - b) Should an unpaid ticket be used, the patron will be informed of the amount of the unpaid fee. Once informed of the parking fee amount, the patron will be allowed to pay with an approved method.
 - c) Should an invalid or unreadable ticket be used, the display must read “INVALID” and the ticket will be rejected and the FMS will log the occurrence with date, time, card/tag reader location, ticket number/last four digits of card number and type of invalid access.

The POFS will reset for processing the next patron and the necessary steps to correct the situation shall be determined by the use of the push-to-call intercom system.

iii. Payment Operations

- a) See the definition of “Satisfactory Station Payment” above for information pertaining to patron options for completing the payment process.
- b) Should the patron complete the payment process with an approved method, the entry ticket must be validated and returned to the patron to be used to exit the facility using an in-lane Exit Station.
- c) Should the method of payment selected by the patron prove invalid, the display must read “INVALID”. The POFS will display the last valid fee calculation and the patron must be directed to either insert payment or use the intercom to determine the necessary steps to correct the situation.
- d) Should the patron wish to pre-pay the full amount of their calculated charge (as in the case of special event fixed fee charge, or in the case of the “All Day Maximum” charge) in advance well before the customer intends to exit the garage, the FMS and all POF stations must provide for customer-facing instructs and functionality to execute this type of pre-payment option.
- e) Validations: Should a patron wish to have the fee recalculated using a validation prior to making payment, the patron will either scan a barcode/CR code validation (“coupon”) or insert a ‘chaser ticket’ validation into the reader. Should the patron wish to use a barcode validation from a paper print or from a mobile phone, or ID badge, the patron will place the barcode image underneath the optical scanner.
 - i. Should the validation be valid, the fee will be re-calculated based upon the coupon amount, and the patron will be informed of the amount of unpaid fee, if any. Once informed of the parking fee amount, the patron shall pay with an approved method. Upon Satisfactory Station Payment, the entry ticket must be validated and returned to the patron to be used to exit the facility using an in-lane Exit Station.
 - ii. Should the validation be invalid, the display must read “INVALID”. The POFS will display the last valid fee calculation and the patron must be directed to either insert payment or use the intercom to determine the necessary steps to correct the situation.
 - iii. If the transaction is canceled after the coupon was processed, the entry ticket must be re-encoded to include the discount information, and the canceled ticket returned to the patron.

- f) If no action is taken by the patron after a preset period, the ticket will be rejected and the POFS will reset for processing the next patron, and necessary steps to correct the situation shall be determined by the use of the push-to-call intercom system.
 - iv. Transaction Completion
 - a) Upon completing the payment process, the POFS will re-encode the parking ticket as having been paid (the ticket is useable to exit the facility using an in-lane Exit Station).
 - b) Patron will be offered the option of a printed receipt.
 - c) Validated tickets will be dispensed (patron takes ticket).
- 9. Remote Ticket Validator
 - a. Validation Process
 - i. Upon completing their paid shopping, restaurant, or theater visit, customers (parkers) may have their parking tickets physically or electronically validated within the retailer's store. Remote validation units can be installed in each of the checkout lanes, or if desired, at a centralized location such as a Customer Service Desk.
 - ii. To validate a customer's parking ticket, the store clerk would insert or scan the parking ticket into their validation unit, select the appropriate validation type, and remove the ticket from the unit (as applicable). The ticket is then given back to the patron. Alternatively, the clerk would send a QR code to the customer's phone.

1.5 PERFORMANCE REQUIREMENTS

- A. All electrical equipment must be approved by Underwriters Laboratories, Inc. (UL) where such approval is standard in the industry. Where required by Code or as otherwise indicated in the Contract Documents, provide electrical enclosures complying with applicable NEMA standards.
- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.6 SUBMITTALS

- A. Product Data: Manufacturer's data, specifications, recommendations, and standard details for all items specified in this Section including accessories and other components of the Work. Include the manufacturer's instructions for installation and maintenance for each type of parking equipment required.
 - 1. Provide templates for anchor bolts and other items encased in concrete or below finished surfaces in sufficient time so as not to delay the Work.
- B. Shop Drawings: Show complete layout including plan views, elevations, sections, details of components, and attachments to other work. Detail equipment assemblies and indicate

dimensions, required clearances, method of field assembly, components, location and size of each field connection.

1. Wiring Diagrams: The Contractor must supply three sets of wiring diagrams and maintenance manuals for each of the major components of the system, as well as the entire as-built system wiring diagrams.
- C. Operation and Maintenance Data: Provide the Owner with Manuals and Record Drawings for all aspects of the PCS. Manuals should clearly delineate the day-to-day operation and maintenance of the equipment. As a minimum, the following must be provided:
1. Supervisor Manual (3 copies): Operations manual describing data collection processing and transmission systems and equipment for supervisory personnel.
 2. Maintenance Manuals (3 copies)
 - a. Include first-line and preventative procedures.
 - b. Software programming manuals describing each item of software in the lane equipment and all report programs.
 - c. Equipment electrical circuitry diagram.
 - d. As-built equipment wiring diagram.
 - e. See Section 01 77 00 Division 1 for additional requirements.
 3. Indicate at least two sources for purchasing parking tickets.
- D. Closeout Submittals
1. Prior to initiation of field test and training:
 - a. At least thirty (30) days prior to scheduled training sessions, submit a Training Plan. Include at a minimum, a description of all training courses including identification of instructional outcome, duration of course, and type of presentations.
 - b. Submit one (1) electronic copy of operations manuals, maintenance and administration manuals.
 - c. Deliver recommended spare components, complete and ready to use, prior to commencement of operational testing and maintain inventory of spare components at this level as components are used during warranty period.
 - d. If a special tool is required to perform any function or maintenance, provide three (3) of these tools.
 2. Upon completion of the work of this Section and prior to final payment, submit the following:
 - a. Testing and Inspection Program Documentation
 - i. IPCE Contractor's Testing Reports
 - ii. IPCE Contractor's Inspection Reports
 - b. Keys: Provide Owner with two (2) sets of all unique keys for equipment locks.

c. Record Documents

- i. As-Built Shop Drawings.
- ii. As-Installed Wiring Diagrams for entire System.
- iii. Copies of all licenses, registrations, documentation, and media as may have been included with any commercially available software packages provided with System. In addition, ensure that all licenses, registrations and warranties have been transferred to Owner prior to final software turnover.

E. Quality Control Submittals

1. Qualification Data

- a. Installer: The installer must be approved by the manufacturer in writing on company letterhead. The manufacturer must certify that the installer is sufficiently versed on the latest technology enhancements that are applicable to the planned IPCE installation.
 - b. Servicing Contractor(s). If service is to be provided by the manufacturer, supplier, or installer, provide clarification of same in the submittal.
2. Coordination Shop Drawings: Drawings must be sufficient to indicate coordination with adjacent work.
3. Warranty: Sample warranty form.

1.7 QUALITY ASSURANCE

- A. Source Quality Control: Except where specified otherwise, obtain parking control equipment and accessories from a single manufacturer or from manufacturers which are acceptable to the parking control equipment manufacturer.
- B. All equipment must be new. Rebuilt, reconditioned, or used parts are not acceptable.
- C. Qualifications
1. Supplier must have at least ten (10) years of experience in the parking control field and maintain a stock of replacement parts for the equipment specified. The equipment supplier must have a service outlet within 100 miles of the project.
 - a. Contractor must supply a list of anticipated times to replace any piece of equipment.
 2. Installer: Installer must have previously worked successfully with the equipment manufacturer and must submit names, locations, contacts, and telephone numbers for the five (5) most recently installed, completed projects.
 3. Servicing Contractor(s): Servicing Contractor(s) must have at least three (3) years of experience with the manufacturer's equipment and must have serviced at least five (5) sites for a minimum of two (2) years within a 75-mile radius of the Service Provider's office.

1.8 OWNER'S INVENTORY

- A. The Owner will maintain an inventory of items related to the IPC. The Contractor must obtain necessary Owner approvals of inventory items and coordinate the delivery schedule with the Owner. Inventory must include the following:
 - 1. See Article 3.9 below for requirements related to the provision of extra materials.
 - 2. See Part 4 of this Section for requirements related to the provision of additional expendable items.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver equipment to the Project site packaged to prevent damage and marked for easy identification of each component. Sequence deliveries to avoid delays and minimize on-site storage.
- B. The equipment must be stored in a clean, dry location. Protect from all possible damage. Damaged equipment must be replaced at no cost to the Owner.

1.10 OPERATING CONDITIONS

- A. Equipment must be designed, fabricated, and installed to operate effectively under the climate and exposure conditions to which the equipment will be exposed. All equipment located within the parking areas is for exterior, exposed-to-weather use.
 - 1. If any System heating or cooling devices do not operate to the Owner's satisfaction within the warranty period, they must be repaired and/or replaced by the manufacturer.
- B. It is recognized that certain solid state and computer-type control equipment may require special electrical power and grounding considerations; if so, required for this Project, the Contractor must:
 - 1. Include in the bid amount, the cost to provide and install voltage stabilization modules or devices to protect each component from normal voltage variations.
 - 2. Advise the Owner in writing at the time of the award of the contract of any special electrical power and grounding requirements.

1.11 COORDINATION AND SCHEDULING

- A. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.
- B. Coordinate placement of conduit, accessories, and power wiring to equipment.
- C. Coordinate installation of anchorages for all parking control equipment. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in the

concrete or other substrate. Deliver such items to the Project site(s) in time for installation and as required to prevent delaying the Work.

- D. Supplier of the parking control equipment must provide an experienced field representative to meet with the installer and the Electrical Subcontractor, before any rough-in work begins, to review building plans as they relate to the IPCE and must do the following:
1. Explain details or precautions necessary to assure that all System control equipment, and in particular, the detector loops will work properly.
 2. Determine that all required conduits and wiring are properly laid out.
 3. Coordinate with the Contractor to determine appropriate depths for detector loop installation and, based on the structural system, insure depth does not affect the slab reinforcing steel.

1.12 LICENCING

- A. All required operating system and application software licenses must be supplied in sufficient quantities to accommodate the number of users and all of the equipment per the requirements of this Section.
1. If any required licenses will require the payment of fees the annual or monthly fees for such must be disclosed at the time proposals are submitted.

1.13 WARRANTY

- A. All PCS and IPCE equipment are to be covered by a manufacturer's warranty for all parts and labor for a two-year period, excluding misuse or vandalism.
1. Include, the cost to extend the warranty for a third, fourth, fifth, sixth, and seventh year as presented on the PARCS PRICE FORM.
 2. All warranties commence when the respective equipment is totally operational and is accepted in writing as such by the Owner.
- B. All illuminated signage is to be covered by a manufacturer's warranty covering all parts and labor for a two (2) year period, excluding misuse or vandalism.

1.14 MAINTENANCE AND SERVICE

- A. General Requirements
1. PCS and IPCE Maintenance must be inclusive of both preventative maintenance and remedial maintenance for all PCS equipment, systems, communications subsystems, host computer systems hardware, and software in accordance with the requirements of this Section.
 - a. PCS/IPCE must be maintained to perform to the design specifications as approved by the Owner.

2. PCS and IPCE Service (remedial maintenance) must include all repairs, adjustments, and/or replacement of any or all PCS/IPCE components as necessary to ensure continuous operation of the entire PCS including all integrated equipment.
- B. PCS/IPCE Maintenance Plan
1. General
 - a. The PCS/IPCE Maintenance Plan (Maintenance Plan) must be included in the Maintenance Manual as described in the “Submittals” Article above.
 - b. The Maintenance Plan must be approved by the Owner prior to installation of the PCS/IPCE and must address the overall maintenance procedures as required to meet the requirements of this Specification. Any modifications to the Maintenance Plan must be submitted for prior approval by the Owner.
 2. The Maintenance Plan must include:
 - a. The manufacturer’s recommended procedures and checks are necessary for preventive maintenance of the PCS/IPCE. This must be specified for pre-operation, periodic, and “as required” checks as necessary to assure reliable PCS/IPCE operation.
 - b. Servicing Contractor’s recommended procedures for repair and maintenance of the PCS/IPCE and all devices during the warranty period. Include maintenance program requirements for the PCS/IPCE for one-year, five-year, and ten-year durations.
 - c. Detailed instructions must include specific references to show where failure to follow special procedures would result in damage to the PCS/IPCE, improper operation, danger to operating or maintenance personnel, consumption of excessive man-hours, etc.
 3. The Maintenance Plan must also:
 - a. Establish who-what-when-where maintenance responsibilities.
 - b. Establish reporting procedures.
 - c. Incorporate maintenance into sub-contractor/vendor equipment and service contracts (as applicable).
 - d. Provide names, addresses, and contacts for potential secondary sources of supply.
- C. Operations Contract: The Work under this Section must include all labor, materials, transportation, and support services needed to maintain all systems and equipment (PCS/IPCE) in accordance with the approved Maintenance Plan for the duration of the warranty period.
1. General Requirements
 - a. Maintain locally an adequate stock of parts for replacement or emergency purposes. Only genuine parts and supplies used in the manufacture and installation of the original equipment must be provided.

- b. Replace or repair materials and parts which become defective or deteriorate for any reason except through misuse or vandalism.
 - c. Furnish competent and trained experts to check, adjust, lubricate (as applicable) and otherwise maintain the PCS/IPCE in operation without defects or deterioration. Provide all necessary spare parts, inventory, tools, cabinets, and test equipment as required for maintenance coverage.
 - d. Local service must be provided to maintain the PCS/IPCE during the warranty period with regularly scheduled maintenance. Avoid performing regularly scheduled maintenance work during peak traffic periods.
 - e. Emergency call-back service for minor repairs and adjustments to return the PCS/IPCE to service must be available on demand, 24 hours per day, seven days per week. In the case of any malfunction, the response time for repair must be limited to two (2) hours, and no equipment, system, or component must be left non-operable after the next business day following notification by the Owner.
2. Contract Duration: Starting at the time of acceptance of the PCS/IPCE by the Owner, provide complete systematic inspection, preventative maintenance, and remedial maintenance of the PCS/IPCE for the duration of the warranty period (inclusive of any extended warranty periods). Extension of warranty and the associated Operations Contract(s) must be at the option of the Owner. Servicing Contractor(s) will notify the Owner of a request to extend sixty (60) days prior to the expiration of the base term. The Increase in cost must be limited to the percentage increase in the cost of living for that year.

1.15 PARCS SYSTEM SUPPLIER/INSTALLER'S QUALITY CONTROL SYSTEM

- A. General: In accordance with Division 1 requirements, the PARCS system supplier/installer (i.e., the Contractor) must establish a Quality Control System for the work of this Section. Controls must be adequate to cover all installation operations.
- B. The Contractor's control system must include, but not be limited to, the following:
 - 1. Review of existing conditions, requirements of related work, installation instructions, storage and handling procedures, and protection measures.
 - 2. Coordination with the NHPA's parking operations unit.
 - 3. Coordination with any other planned or in-progress garage facility repair and/or restoration work.
 - 4. Scheduling and convening a Pre-Installation Conference.
- C. Pre-Installation Conference: A pre-installation conference must be held prior to the commencement of field installation to establish procedures to maintain required working conditions and to coordinate this work with related and adjacent work.

1. The Contractor must require responsible representatives of each party concerned with a portion of the work to attend the conference, including but not limited to the following:
 - a. Contractor's Superintendent and Project Manager
 - b. Equipment supplier.
 - c. Installation Subcontractor(s).
 - d. Electrical Subcontractor(s).
2. Contractor must have a copy of all approved Shop Drawings and Submittals applicable to the Work present at the pre-construction conference.
3. The Owner or owner's agent must be invited to attend the conference at their election and must be notified by the Contractor at least fifteen (15) working days prior to the scheduled date of the conference.
4. Minutes of each conference must be recorded by the General Contractor and must be distributed by him/her in typed or printed form to each party in attendance within five (5) working days of the meeting. One copy of these minutes must also be transmitted to the Owner and the Owner's agent for information.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products and Basis-of-Design: All products must be state-of-the-art in meeting the System requirements. Where a Basis-of-Design component is indicated, provide the named product configured and equipped as required to meet IPCE requirements or a comparably configured and equipped product meeting the requirements of this Section.

2.2 MATERIALS

- A. General: Utilize materials indicated below in the manufacture and installation of the IPCE. The use of alternative materials is subject to Owner's approval. All proposed alternative materials must be clearly identified in the Submittals for this Section.
- B. Generic Products
 1. Aluminum: Alloy and temper recommended by aluminum producer/manufacturer for type of use and as compatible with specified finish, and as follows:
 - a. Sheet: ASTM B 209
 - b. Extruded Shapes: ASTM B 221
 2. Cold-Rolled Steel Sheet: ASTM A 1008/A, Commercial Steel (CS), Type B.
 3. Iron and Steel Hardware: ASTM A153 (hot-dip galvanized), includes anchor bolts.
 4. Stainless Steel: ASTM A240, Type 304.
 5. Bituminous Mastic: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat per ASTM D1187. Provide inert-type

noncorrosive compounds free of asbestos fibers, sulfur components, and other deleterious impurities.

C. Manufactured Products

1. Access Tickets: High-quality ticket paper suitable for production tickets and receipts with applied printable barcode technology. Tickets must be custom printed with text and graphics as determined by the Owner. Ticket size and paper type must be as required by the ticket dispenser and reader requirements.

2.3 SYSTEM (PCS) CONFIGURATION

- A. General: See Section 11 12 11 – Parking Control System.

2.4 EQUIPMENT

A. General

1. The following equipment list consists of basic System components. Auxiliary items required for the proper functioning of the System, whether mentioned or not, must include but not be limited to: heaters, coolers, wiring, transformers, relays, pedestals, etc. It is the manufacturer's responsibility to provide every component necessary for a complete functional System.
 - a. See Integrated Parking Control Equipment Configuration Schedule in Part 3 of this Section for scheduled quantities of the basic System components for various locations within the facility.
2. Equipment must be located as shown on the Drawings. Adjustments may be necessary due to field conditions and may be permitted following consultation with the Owner.
3. Fee Computer: The term "Fee Computer" referenced throughout this RFP document is used to generally address the functionality of parking facility cashiering stations and PCS facility management workstations that will cloud-connected. The Authority recognizes that the same processes and functionality that have traditionally been performed using actual Fee Computers will be performed via a cloud-connected PC (Desktop/Laptop/Tablet) or Cellular device. The proposers are required to explain and provide a PCS cloud-based solution that takes the place of the traditional on-premise server-based Fee Computers but delivers an equivalency of the functionality and performance of Fee Computer devices. Stations (i.e., The cloud-based equivalence of a Fee Computer (i.e. a virtual Cashier Station) to be connected to the FMS platform must be capable of monitoring, and controlling all necessary software through the cloud connection to all the PARCS hardware, devices, and all peripherals as described in this Section. Such Fee Computer stations must be additionally equipped as follows:
 - a. Operation
 - i. All Fee Computer programming and report generation must be done via FMS Workstation. See Section 11 12 11 for requirements.

- b. Programming
 - i. The Fee Computer must be user programmable.
 - ii. Provide a means to program up to 72 cashiering stations.
 - iii. Cashiers will log on to operate the Fee Computer by entering up to a 6-digit alphanumeric code and cashier letter.
 - iv. Refer to the SYSTEM CONFIGURATION part of the specification for further programming features.
- c. Peripherals
 - i. Inputs
 - a) Keyboard; Wired (USB port interface) with numeric keypad.
 - b) Computer Mouse: Wired (USB port interface), optical, with center/third button with scroll.
 - ii. Outputs
 - a) Computer Display: Color, 19" flat touchscreen, 0.28 dot pitch or less.
 - b) 1 Ethernet – 100/1000 Mbps Networking Port (min.).
 - c) Printers
 - d) scanners
- d. Performance Requirements: In addition to Performance requirements indicated in Part I of this Section, the following specific requirements are applicable to Fee Computers:
 - i. Accommodate password-protected access.
 - ii. Accommodate audible system alarms.
 - iii. Fee Computer Reporting: Each fee computer must be capable of providing the following reports:
 - a) Cash Report: This report will list all revenue received by the cashier. Break down the report as follows:
 - i. Type of report.
 - ii. Date and time of report.
 - iii. Lane number.
 - iv. Lane name.
 - v. Cashier name.
 - vi. Time and date report was last cleared.
 - vii. Quantity and amount of parking fees charged by fee structure.
 - viii. Quantity and amount of preset fees charged (provide 5 preset keys).
 - ix. Quantity and amount of miscellaneous charges.
 - x. Quantity and amount of lost tickets.

- xi. Quantity and amount of surcharges.
 - xii. Total amount of charges.
 - xiii. Quantity and amount of department validations.
 - xiv. Quantity and amount of debits (unpaid charges).
 - xv. Total amount of credits.
 - xvi. Average parking fee computed.
 - xvii. Number of times the no-sale key was used.
 - xviii. Total number of transactions.
 - xix. Total number of cars that exited.
 - xx. Time card. Supply a time card printout for the cashier. Include the following: time and date cashier logged on, time and date cashier logged off, total time cashier was on shift in hours and minutes, starting transaction number and ending transaction number.
- b) Lane Report: This report will list all revenue received by all cashiers using the Fee computer. Break down the report as follows:
- i. Type of report.
 - ii. Date and time of report.
 - iii. Date and time last report was taken.
 - iv. Lane number.
 - v. Lane name.
 - vi. Quantity and amount of parking fees charged by fee structure.
 - vii. Sub-total of quantity and amount of parking fees charged.
 - viii. Quantity and amount charged by each preset key.
 - ix. Quantity and amount of all surcharges.
 - x. Sub-total of quantity and amount of surcharges.
 - xi. Quantity and amount of miscellaneous charges.
 - xii. Quantity and amount of lost tickets
 - xiii. Sub-total of miscellaneous and lost tickets.
 - xiv. Total amount of charges.
 - xv. Total quantity and amount of debits.
 - xvi. Total quantity and amount of merchant validations.
 - xvii. Total amount of all credits.
 - xviii. Average fee.
 - xix. Total no sales.
 - xx. Total voids.
 - xxi. Total transactions.

- xxii. Total resets. Number of times power for the Fee Computer was turned on.
- c) Time Card Report: This report must include the last time the report was cleared and list the log-on and log-off times and dates for each cashier. This report must also list the starting and ending transaction number of each cashier.
- d) Validation Report: List all validations by user groups as follows:
 - i. User key.
 - ii. Name of user group.
 - iii. Type of validation. Partial-dollar amount, flat-fixed dollar amount, Time-partial time amount and full-total validation of ticket.
- e) Entry/Exit Report: This report will list ticket IN times in one-hour increments or as programmed by the user. User may program up to 24 time segments to track in and out time statistic in the facility.
- f) Length of stay Report: This report will track the length of time a vehicle stays in the facility. The user may program up to 24 time segments to track average time of tickets.
- g) Dollar Statistics Report: This report is the same as the Length of Stay Report except the report will list the time a vehicle stays in the facility by dollar amount.
- h) Refer to the SYSTEM CONFIGURATION part of the specification for further report features.

B. Automatic Barrier Gates

- 1. General: Each automatic barrier gate unit must consist of an operator and controller housed in a cabinet enclosure with a gate arm. Include the following features:
 - a. Operation Modes: On-line communication to FMS with automatic switch to standalone mode if communications are interrupted.
 - b. Field programmable with built-in service diagnostics.
- 2. Performance Requirements: In addition to Performance requirements indicated in Part I of this Section, Automatic Barrier Gate units must have the following minimum requirements:
 - a. Units must be capable of the following:
 - i. Provide the unit with all necessary control logic for activation by a signal from the card or LPR reader, exit station, entry station, remote switch, or the Vehicle Detection System.
 - ii. Report generation for exception events.
 - b. Controller: The controller must contain logic for one-way lanes, two-way lanes, operations with automatic and push button entry/exit stations, and be easily field programmable through the use of easily accessible DIP type

switches or by keypad buttons. All gate logic controllers must be removable and interchangeable with the logic controllers of all other gates on this project. Provide output signals for the following counts: Total monthly, total transient, total vehicles, and total illegal vehicles (see illegal vehicle counts below). These counts must be taken directly from the control logic and not from detector loops. Provide a momentary contact any time a vehicle illegally passes through the lane by tailgating the previous vehicle. Provide two vehicle detectors inside the control logic (see Vehicle Detection System in this Section). The logic controller must send and receive information from the FMS.

- c. Automatic Barrier Gate Reporting: Automatic barrier gate units must provide full reporting functionality including, but not limited to, the following:
 - i. Gate off line/powered off, online.
 - ii. Gate manually raised or manually lowered.
 - iii. Gate manually raised and a vehicle crossed over the loop detector.
 - iv. Gate opened remotely via a command from the controller.
 - v. Communication failure.
 - vi. Device Malfunction.
 - d. Mechanical: Gate motor minimum 1/3 HP, heavy duty, high output torque, accepting single-phase 115 VAC power input, instant reversing with duty cycle match to a load in excess of 10,000 operations per day.
 - e. Electrical: Self-contained, replaceable components. Include wiring for control units. Supply a cadmium-plated connection box for all external connections.
 - i. All external inputs must be low voltage controlled.
3. Fabrication Requirements
- a. Cabinet: Manufacturer's standard construction.
 - i. Cabinet Finish: See Finishes section below.
 - ii. Keys: Locks must be keyed to the Owner's current keycode.
 - b. Gate Arm: Fiberglass or Aluminum construction with breakaway gate arm flange for straight arms. Provide folding gate arm where specified or if required by low height clearance. Height of arm is approximately 36 inches in the down position.

C. Automatic Lane Stations (LS)

- 1. General: Automatic Lane Station units must be configured to operate as either Lane Entry Station (LSE) Units or Lane Exit Station (LSX) Units as required by the Contract Documents.
 - a. At a minimum, all LS units must be capable of the following:
 - i. Communicating with the FMS in online mode.

- ii. Vaulting voided tickets.
 - iii. Scanning barcode/QR validations.
 - b. At a minimum, LSE units must additionally be capable of the following:
 - i. Accepting credit cards for “credit card in” functionality unless, on a location-by-location basis, the proposer persuades the Owner that “credit card in” would be of no practical benefit.
 - c. At a minimum, LSX units must additionally be capable of the following:
 - i. Reading encoded tickets issued by an Entrance Station.
 - ii. Reading validation tickets generated by a Remote Ticket Validator.
 - iii. Interacting with LPR system
 - iv. Accepting credit/debit cards.
 - v. Computing parking fees based on the applicable fee schedule for the transaction period and applying validation ticket credits.
 - vi. Allowing transient parkers to pay for parking fees (single ticket at one time) using a valid form of payment and, upon Satisfactory Station Payment,
 - vii. Providing a lost ticket payment option.
 - viii. Issuing a paid transaction receipt (at the patron’s option).
 - d. Access Configuration: LS units must allow for easy frontal access for patrons seated in a vehicle. Comply with all applicable local, State and ADA accessibility requirements including but not limited to reach of all slots and buttons and sound for all audible and verbal cues.
2. Product Options
- a. Each LS unit must have the following:
 - i. Color graphic backlit liquid crystal display to display time, date, and messages.
 - ii. Controller(s).
 - iii. Integral proximity card reader.
 - iv. Built-in intercom with a push-to-call button.
 - v. See Performance requirements below for additional option-related requirements.
 - b. Additional Options for LSE Units
 - i. Illuminated ticket request button.
 - ii. Ticket Dispenser/Reader Unit: See the Components Article below for additional configuration requirements.
 - iii. Ticket magazines with low ticket alarms.
 - iv. Ticket Reserve: Provide a removable ticket tray, to be located in the base of the cabinet, with a capacity for at least 5000 tickets.
 - v. Buzzer unit to momentarily sound each time a ticket is issued.
 - vi. Ticket Vault: Vault to accommodate no less than 500 validated tickets.

- c. Additional Options for LSX Units
 - i. Exit Verifier/Reader Unit: See Components Article below for additional configuration requirements.
 - ii. Ticket Vault: Vault to accommodate no less than 1000 validated tickets.
 - d. Each LSX Unit must:
 - i. Process tickets using barcode/QR code technology.
 - ii. Process credit/debit cards for payment of parking fees.
3. Operation
- a. On-Line Functionality: When in operation, Automatic Lane Station units must maintain sufficient on-line communication with the FMS to ensure operational functionality including, but not limited to, real time monitoring of the following:
 - i. Transaction data.
 - ii. Event notifications and alarms.
 - iii. Unit reports.
 - b. Patron Interface: Configure LS units to operate as either Entry Station Units or Exit Station Units as required by the THEORY OF OPERATION in Part 1 of this Section.
 - i. Each LS unit must provide concise customer user instructions with graphic cues where appropriate for user-friendly operation. Patron guidance lights and/or graphics must activate when appropriate and indicate to the patron where to insert appropriate payment.
 - ii. Invalid Operation Indication: If an unreadable, invalid, or expired ticket or credit card is inserted, it must be returned to the patron accompanied by a display message. If applicable, ticket or credit/debit card must be returned to the patron.
 - c. Configuration and Service Interface: LS units must be capable of being fully configured and serviced in the field. Units must also be programmable on-line through the FMS.
 - d. LS Unit Reporting: Units must provide full reporting functionality including, but not limited to, the following:
 - i. Ticket Jam.
 - ii. Ticket in Throat.
 - iii. Low Tickets.
 - iv. No Tickets.
 - v. Encoding Not Read.
 - vi. Back-Out Ticket.
 - vii. Tickets Issued and/or Read.
 - viii. Tickets Read.
 - ix. Arming Loop Activated.

- x. Closing Loops Activated.
 - xi. Gate Opened.
 - xii. Tickets Vaulted.
 - xiii. Device Malfunction.
 - xiv. Standard Reports must include, but not by way of limitation, the following: Totals, inventory status, inventory maintenance activities, transaction journal report, event journal report, and validation/discount report.
4. Performance Requirements: In addition to Performance requirements indicated in Part I of this Section, LS units must have the following minimum requirements:
- a. All Units
 - i. LS units must operate automatically (completely unstaffed).
 - ii. Field programmable with built-in service diagnostics.
 - iii. Programmable timer for closing automatic barrier gate.
 - iv. Using ticket data stored by the FMS.
 - v. Controller(s) must not lose any data if power supply is interrupted and must restart automatically upon restoration of power.
 - vi. On-line communication to FMS with automatic switch to standalone mode if communications are interrupted. Provide off-line transaction buffer for 1000 transactions minimum.
 - vii. Provide Real-time clock synchronization with FMS for automatic daylight savings time adjustment.
 - viii. Report generation for events and exception events.
 - ix. All LS units must be in compliance with PCI-Security Standards Council (PCI-SSC) including the Data Security Standard (PCI DSS), Payment Application Data Security Standard (PA-DSS), and PIN Transaction Security (PTS) requirements. Specifically, the payment application used by the machines and software must be listed on the PCI Security Standards Council's website as possessing a Validated Payment Application.
 - b. Entry Station Units (LSE)
 - i. Switchable automatic ticket issuance mode to cause the unit to issue a ticket when a vehicle is detected in-lane. Once a ticket is automatically issued, the ticket request button must be disabled until the lane is automatically reset for the next entering vehicle.
 - c. Exit Station Units (LSX)
 - i. Fee Calculation
 - a) Calculate and display the amount owed on unpaid or insufficiently paid ticket based on current exit time and system rate schedules.
 - b) Accept the exit grace period programmed at the central computer.

- d. Mechanical
 - i. General: The internal mechanisms must be of quality constructed material with rust protective coating on exposed parts and removable as a unit.
 - ii. Reader Unit: The reader mechanism must interface with the ticket vault in the Lane Station and must be removable as a unit. See Components Article below for additional Reader Unit requirements.
 - iii. Receipt Printer Unit (LSX Units Only): The unit must be equipped with a thermal receipt printer that has a low paper sensor and must be capable of reporting low paper to the FMS software.
- e. Electrical
 - i. Provide unit with all necessary control logic for activation by a Vehicle Detection System.
 - ii. All components must be replaceable, plug-in and self-contained.
 - iii. All electrical connections must be keyed plug.
 - iv. Supply a cadmium-plated connection box for all external connections and provide a 115 V.A.C. grounded convenience outlet, 60-watt heater, heater on/off switch, preset heater thermostat, dispense on/off power switch and clock on/off switch.
 - v. Provide surge protection for data lines.
- f. Operating System Functionality: LS units must provide full operating system functionality including, but not limited to, the following (as applicable):
 - i. General
 - a) Rate structures must be customizable to include variable rates and free parking hours.
 - b) LSX Units Only: Receipts must be issued with the following information: Facility name, date, time in, time out, amount, transaction number, unit I.D. number, and rate selected.
 - ii. Validation Accounts
 - a) Store IDs (validation accounts) must be assignable to participating merchants that will be validating parking patron's valid entry tickets with a Remote Ticket Validator.
 - b) Each Store ID must be programmable in the automatic LS with its own unique ID.
 - c) Validations at a minimum must be by time, fee, percent, flat fee, and surcharge.
 - d) LSX Units Only: Units must read the Store ID encoded on the ticket and automatically apply the discount or surcharge to the parking fee.
 - iii. Taxes (LSX Units Only)

- a) Units must be programmable to include or exclude tax, multiple tax rates.
 - b) Tax must be programmable to apply before or after validation is applied.
 - c) Each calculation mode must have the capability to apply a programmable tax (0.00 percent to 99.99 percent).
 - d) The tax total must be reported in each total of Total Tax/True Government Take (T/TGT).
 - iv. Cancellation of a Transaction (LSX Units Only)
 - a) A transaction may be cancelled at any time prior to completed payment of the parking fee.
 - b) Once full parking fee payment is completed or credit card approval process has started, transaction cancellation cannot be performed and refunds must not be available.
5. Fabrication Requirements
- a. Cabinet: Cabinet must be durable, vandal resistant, and weather resistant in accordance to the environmental conditions indigenous to the area in which it is installed.
 - i. Units must be sized/configured to contain all necessary internal components in a readily serviceable arrangement.
 - ii. Units must have lock system and appropriate alarm contacts to discourage tampering.
 - iii. The face plate on POFS units must include illuminated buttons to facilitate operation.
 - iv. Keys: For each key type, furnish two (2) keys for each cabinet. Each cabinet must be uniquely keyed.
 - v. Cabinet Finish: See Finishes section below.

D. Automatic Pay-On-Foot Stations (POFS)

- 1. General
 - a. At a minimum, POFS Units must be capable of the following:
 - i. Allowing transient parkers to pay for parking fees (single ticket at one time) using a valid form of payment and, upon Satisfactory Station Payment, issuing a validated ticket to allow the patron to return to their vehicle and exit the facility within a preprogrammed grace period (pursuant to the Theory of Operation requirements of Part I of this Section).
 - ii. Communicating with the FMS in online mode.
 - iii. Computing parking fees based on the applicable fee schedule for the transaction period and applied validation ticket credits.
 - iv. Accepting credit/debit cards and other applicable forms of payment.

- v. Reading encoded tickets issued by an Entrance Station.
 - vi. Reading validation tickets generated by a Remote Ticket Validator.
 - vii. Vaulting voided tickets.
 - viii. Providing a lost ticket payment option.
 - ix. Issuing a paid transaction receipt (at patron's option).
 - x. Additional Requirements for Units Scheduled to Accept Cash Payments (POFS+C)
 - a) Units must additionally accept banknotes as payment, supplying change in banknote currencies.
 - b) Units must additionally include a lockable banknote vault.
 - b. Access Configuration: POFS units must allow for easy frontal access. Comply with all applicable local, State, and Federal ADA accessibility requirements including but not limited to the reach of all slots and buttons and sound for all audible and verbal cues.
2. Product Options
- a. Each POFS unit must have the following:
 - i. Color graphic backlit liquid crystal display to display time, date and messages.
 - ii. Controller(s).
 - iii. Built-in intercom.
 - iv. Exit Verifier/Reader Unit: See Components Article below for additional configuration requirements.
 - v. Ticket Vault: Vault to accommodate no less than 1000 validated tickets.
 - vi. For Units Scheduled to Accept Cash Payments (POFS+C): Provide the following additional options:
 - a) Vaults for banknotes.
 - vii. All options as required to meet the operation, performance, and fabrication requirements of this Section.
 - b. Each POFS unit must:
 - i. Process tickets using barcode technology.
 - ii. Process credit/debit cards for payment of parking fees.
 - iii. For Units Scheduled to Accept Cash Payments (POFS+C) **(no coins)**
 - a) Be capable of accepting 1, 5, 10, and 20-dollar (US) banknotes in any combination for payment of parking fees. Units must automatically reject any counterfeit and/or unauthorized foreign currency.
 - b) Return change (banknotes) and have self-replenisher/recycler for Banknotes.
3. Operation

- a. On-Line Functionality: When in operation, POFS units must maintain sufficient on-line communication with the FMS to ensure operational functionality including, but not limited to, real time monitoring of the following:
 - i. Transaction data.
 - ii. Event notifications and alarms.
 - iii. Unit reports.
- b. Patron Interface: Configure POFS units to operate as required by the THEORY OF OPERATION in Part 1 of this Section.
 - i. Front panel must include a graphic monitor to display all user information and include operational buttons to select and respond to program prompts. User operation must include at a minimum:
 - a) Cancel.
 - b) Lost ticket.
 - c) Receipt.
 - d) Help (intercom).
 - e) Three other assignable function buttons.
 - ii. Each POFS unit must provide concise customer user instructions with voice and graphic cues where appropriate for user-friendly operation. Patron guidance lights and/or graphics must activate when appropriate and indicate to the patron where to insert appropriate payment.
 - iii. Invalid Operation Indication: If an unreadable, invalid, or expired ticket or credit card is inserted, it must be returned to the patron accompanied by a display message. If applicable, ticket or credit/debit card must be returned to the patron.
- c. Configuration and Service Interface: POFS units must be capable of being fully configured and serviced in the field. Units must also be programmable on-line through the FMS.
- d. Unit Notifications: POFS units must provide event notifications including but not limited to the following:
 - i. CPU error.
 - ii. Door alarm.
 - iii. Door open.
 - iv. Shutter error.
 - v. Reader error.
 - vi. Credit/debit card server error.
 - vii. Credit/debit card processing error.
 - viii. Time out error.
 - ix. Receipt paper out.

- x. For Units Scheduled to Accept Cash Payments (POFS+C): Units must provide additional event notifications including but not limited to the following:
 - a) Bank note vault full.
 - b) Bank note reader error.
 - c) Bank note vault error.
 - d) Out of change; operation stopped.
- e. POFS Unit Reporting: Units must provide full reporting functionality including, but not limited to, the following (as applicable):
 - i. Ticket Jam.
 - ii. Ticket in Throat.
 - iii. Encoding Not Read.
 - iv. Tickets Read.
 - v. Tickets Vaulted.
 - vi. Device Malfunction.
 - vii. Standard Reports must include, but not by way of limitation, the following: Totals, inventory status, inventory maintenance activities, transaction journal report, event journal report, and validation/discount report.
- 4. Performance Requirements: In addition to the Performance requirements indicated in Part I of this Section, the following specific requirements are applicable to all POFS units:
 - a. General
 - i. POFS units must operate automatically (completely unstaffed).
 - ii. Field programmable with built-in service diagnostics.
 - iii. Using ticket data stored by the FMS.
 - iv. Controller(s) must not lose any data if the power supply is interrupted and must restart automatically upon restoration of power.
 - v. On-line communication to FMS with automatic switch to standalone mode if communications are interrupted. Provide an off-line transaction buffer for 1000 transactions minimum.
 - vi. Provide Real-time clock synchronization with FMS for automatic daylight savings time adjustment.
 - vii. Report generation for events and exception events.
 - viii. POFS units must be in compliance with PCI-Security Standards Council (PCI-SSC) including the Data Security Standard (PCI DSS), Payment Application Data Security Standard (PA-DSS), and PIN Transaction Security (PTS) requirements. Specifically, the payment application used by the machines and software must be listed on the PCI Security Standards Council's website as possessing a Validated Payment Application.

b. Mechanical

- i. General: The internal mechanisms must be of quality constructed material with rust protective coating on exposed parts and removable as a unit.
- ii. Reader Unit: The reader mechanism must interface with the ticket vault in the POFS unit and must be removable as a unit. See the Components Article below for additional Reader Unit requirements.
- iii. Receipt Printer Unit: The unit must be equipped with a thermal receipt printer that has a low paper sensor and must be capable of reporting low paper to the FMS software.

c. Electrical

- i. Provide the unit with all necessary control logic for activation upon approach by a patron to the front of the unit.
 - ii. All components must be replaceable, plug-in, and self-contained.
 - iii. All electrical connections must be keyed plug.
 - iv. Supply a cadmium-plated connection box for all external connections and provide a 115 V.A.C. grounded convenience outlet, heater, heater on/off power switch, preset heater thermostat, dispense on/off power switch, and clock on/off power switch.
 - v. Provide surge protection for data lines.
 - vi. Provide a UPS power module.
- d. Operating System Functionality (All POFS Units): Units must provide full operating system functionality including, but not limited to, the following (as applicable):
- i. General
 - a) Field programmable with built-in service diagnostics.
 - b) Rate structures must be customizable to include variable rates and free parking hours.
 - c) Receipts must be issued with the following information: Facility name, date, time in, time out, amount, transaction number, unit I.D. number, and rate selected.
 - ii. Validation Accounts
 - a) Store IDs (validation accounts) must be assignable to participating merchants that will be validating parking patron's valid entry tickets with a Remote Ticket Validator or Electronic Validator.
 - b) Each Store ID must be programmable in the POFS with its own unique ID.
 - c) Validations at a minimum must be by time, fee, percent, flat fee, and surcharge.

- d) Units must read the Store ID encoded on the ticket and automatically apply the discount or surcharge to the parking fee.
 - iii. Taxes
 - a) Units must be programmable to include or exclude tax, and multiple tax rates.
 - b) Tax must be programmable to apply before or after validation is applied.
 - c) Each calculation mode must have the capability to apply a programmable tax (0.00 percent to 99.99 percent).
 - d) The tax total must be reported in each total of Total Tax/True Government Take (T/TGT).
 - iv. Cancellation of a Transaction
 - a) A transaction may be canceled at any time prior to the completed payment of the parking fee.
 - b) Once full parking fee payment is completed or the credit card approval process has started, transaction cancellation cannot be performed and refunds must not be available.
- e. Additional Operating System Functionality for POFS+C Units:
 - i. Out of Change
 - a) Units must be programmable to stop operation.
 - b) Display a closed message to the patron.
 - c) Issue a claim check for the amount of change due to the patron.
 - ii. Bank Note Full Operation: When the note vault is full, credit/debit cards must still be accepted. An alarm must be signaled through the FMS when the note vault is full.
 - iii. Off-line Credit/Debit Card Control
 - a) Off-line with the system server, the POFS must continue to accept payment in cash (banknote).
- 5. Fabrication Requirements
 - a. Cabinet: The cabinet must be durable, vandal resistant, and weather resistant in accordance with the environmental conditions indigenous to the area in which it is installed.
 - i. Units must be sized/configured to contain all necessary internal components in a readily serviceable arrangement.
 - ii. Units must have a lock system and appropriate alarm contacts to discourage tampering.
 - iii. The face plate on POFS units must include illuminated buttons to facilitate operation.
 - iv. Keys: For each key type, furnish two (2) keys for each cabinet. Each cabinet must be uniquely keyed.

- v. Signage: Each POFS unit must have an easily readable "Please Insert Ticket" sign on the approach side of the machine.
 - vi. Cabinet Finish: See Finishes Article below.
 - b. Security: POFS should contain the following security features at a minimum:
 - i. Concealed hinges.
 - ii. Multiple locks to access the front cabinet door.
 - iii. Password protection (interface).
 - iv. Alarm siren.
 - v. For Units Scheduled to Accept Cash Payments (POFS+C): Units must provide additional security features including but not limited to the following:
 - a) Vault units must be designed such that one key is required to remove the vault unit and a separate key (including keyway) is required to unlock the vault unit.
 - b) Lock to access the banknote vault.
 - c) Lock to access the drawer of the bank note vault.
- E. Remote Ticket Validators (Merchant Validation Readers)
 - 1. Operation
 - a. General
 - i. Remote Ticket Validator units must be compact standalone desktop units for remote use by authorized entities (merchants, theaters, offices, etc.) to offer a parking discount to their customers.
 - ii. Units must allow the authorized entity to validate the parking ticket with a pre-defined rate or to select a different validation type.
 - iii. Units must be programmable for up to four validation configurations on one device. Validation types must include, but not be limited to, the following:
 - a) Flat Rate
 - b) Discounted Rate
 - c) Hours Discount
 - d) Percentage Discount
 - b. Monitoring (Online Operation)
 - i. Transaction and all events monitored on FMS software in real time.
 - 2. Product Options
 - a. Each Remote Ticket Validation entity shall be provided by account code established on the FMS cloud platform for validation program terms negotiated by program participants.
 - b. Program must provide means for program participants to obtain and distribute pre-purchased validation stickers or packages of chaser tickets for distribution customers.

3. Performance Requirements: In addition to Performance requirements indicated in Part I of this Section, Remote Ticket Validator units must have the following minimum requirements:
 - a. General
 - i. Field programmable with built-in service diagnostics.
 - ii. Support for RS-485 or TCP/IP communication.
 - b. Electrical
 - i. Voltage 100-240V AC 50-60 HZ.
 - ii. Data line surge suppressor.
 - iii. UL rated.
 - c. Operating System Functionality: Remote Ticket Validator units must provide functionality including, but not limited to, the following (as applicable):
 - i. Multiple time increments (i.e., 1-hour, 2-hour, 3-hour).
 - ii. Adjustable grace periods (i.e., 15 minutes, 20 minutes, 25 minutes).
 - iii. Time restrictions (good only between a specified time and/or day of the week).
4. Fabrication Requirements
 - a. Cabinet: The cabinet must be durable and vandal resistant.
 - i. Rugged steel housing for durability.
 - ii. Units must be sized/configured to contain all necessary internal components in a readily serviceable arrangement.
 - iii. Units must have lock system and appropriate alarm contacts to discourage tampering.
 - iv. Keys: For each key type, furnish two (2) keys for each cabinet. Each cabinet must be uniquely keyed.
 - v. Cabinet Finish: Manufacturer's standard durable finish/color.

F. Illuminated Signage Systems

1. General Illuminated variable message signage systems must be the parking control equipment manufacturer's standard manufacture and/or integrated product providing it is electrically-powered and meets or exceeds the basis-of design product(s) indicated.
 - a. Provide direct view LED illuminated signs suitable for outdoor use.
 - b. All signs must be single faced unless noted otherwise.
2. Operation
 - a. "Full" Signs
 - i. Basis of Design: Signal-Tech TCL718R-135DS (www.signal-tech.com) or approved equivalent.
 - ii. General
 - a) Signs must have double stroke "FULL" (red) display copy.

- b) Signs must be capable of being activated either manually or automatically from the facility management software system.
 - iii. Locations: Provide one sign at each vehicular entrance to the facility.
 - iv. Mounting Configuration: Dual Angle 30°/45° Wall Mount (0.125" bent plate), post mount, or pedestal mount, unless shown otherwise in the Drawings.
- b. Remote Fee Indicators
 - i. General: Remote Fee Indicators must be freestanding pedestal mounted devices connected to the fee computer and must indicate the following utilizing a digital display:
 - a) Amount due
 - b) Change
 - c) Time
 - ii. Product Options
 - a) Pedestal mount must be factory finished.
 - b) The cabinet must be weatherproof with a clear impact proof window.
 - c) A connection cable must be provided for connection to the fee computer.
 - d) See requirements for Illuminated Signage Systems for additional product options.
 - iii. Mounting Configuration: Wall mount unless shown otherwise in the Drawings.
- c. Illuminated Lane Controllers
 - i. Where indicated in Part 3 of this Section, select one of the following, on a location-by-location basis:
 - a) "X" and Down Arrow Display
 - i. Basis of Design: Signal-Tech TCL1212RG-175DS or TCL1818RG-175DS (www.signal-tech.com) or approved equivalent.
 - ii. General: Signs must have double stroke "arrow" (green)/ "X" (red) display copy.
 - iii. Cabinet Size: Minimum 12"x12". Provide larger if space permits.
 - b) Open-Closed Display
 - I. Basis of Design: Signal-Tech TCL718GR-100 or TCL1026GR-100 (www.signal-tech.com) or approved equivalent.
 - II. General: Signs must have a single stroke "open" (green)/ "closed" (red) display copy.

- III. Cabinet Size: Minimum 7"x 18". Provide larger if space permits.
- ii. Mounting Configuration: Full-width ceiling mount, side mount, angle mount, swivel-mount, double-post mount, or single-post mount unless shown otherwise in the Drawings. Include all required brackets for complete installation.
3. Accessories: Provide the following accessories meeting the sign manufacturer's requirements.
- a. Switching
 - i. Provide multi-gang switches installed in a standard electrical box of appropriate configuration. For locations where electrical boxes are surface mounted, provide additional enclosure, provide additional enclosure as required to accommodate the manufacturer's standard switch plates.
4. Performance Requirements
- a. LED lamps must be industry-standard super-bright with a wide viewing angle.
 - b. The failure of an LED string must not cause the failure of any other LED string.
 - c. Operational temperature range: -30°F to +165°F.
 - d. Humidity range: 0% to 99% (non-condensing).
 - e. Electrical
 - i. Factory wired complete (field connection for line-in only).
 - ii. Integrated solid-state power supply.
 - iii. UL approved for wet locations.
 - iv. LED Circuitry
 - a) The circular base of the discrete LEDs must be soldered so that they are flush. All LEDs must be perpendicular to the circuit board.
 - b) All exposed metal on both sides of the LED circuit board (except connector contacts) must be protected from water and humidity by an application of conformal coating. The conformal coating must contain a UV brightener to aid in visual inspection.
 - c) The presence of ambient radio signals, magnetic interference, and electromagnetic interference must not impair the performance of the sign system. Interference includes power lines, transformers, and motors. The sign will not radiate electromagnetic signals that adversely affect any other electronic device, including those located in vehicles passing underneath or near the sign and its' controller.
 - v. Electrical Characteristics: 120 volts AC

- a) Low Voltage Signage Option: At Contractor's option, low voltage signage may be provided. All conductors and transformers must be enclosed in metallic conduits and/or enclosure and must be suitable for exterior exposure in areas open to the elements.
- 5. Fabrication Requirements
 - a. Cabinet: Cabinet must be durable and weather resistant in accordance to the environmental conditions indigenous to the area in which it is installed.
 - i. All cabinet components must be manufactured from corrosion-resistant material. All seams must be weather-tight. All-hardware must be tamper-proof type.
 - ii. Face panel to be smoke tinted polycarbonate (1/8" min. thickness) so that message blanks-out when sign in off.
 - iii. Mounting: Configure cabinet to meet mounting type indicated in the Contract Documents.
 - iv. Cabinet Color: Manufacturer's standard bronze color.
 - b. Mounting: All cabinets to be provided with mountings manufactured from corrosion-resistant material compatible with sign cabinet. All mountings must be provided by the illuminated signage manufacturer.
 - i. Finish: Match sign cabinet finish.

G. Pedestrian Alert Systems

- 1. General: Pedestrian Alert Systems must consist of two weatherproof strobes and one weatherproof sounder located at each gate-controlled vehicular exit from the garage.
- 2. Strobe Light
 - a. Basis of Design: Cooper Industries XB13 Series "Uncertified" or approved equivalent.
 - b. Materials
 - i. Glass-reinforced polyester housing.
 - ii. UV stable polycarbonate lens.
 - iii. Stainless steel cover screws.
 - iv. Stainless steel lens guard.
 - c. Tube Type: Xenon Discharge.
 - d. Tube Energy: 10 joules (second flash 7.5 joules).
 - e. Tube Life: >1 x 10⁶ flashes.
 - f. Dual Flash Rate
 - i. Time Between Dual Flashes: 0.5 second.
 - ii. Charging Time: 1 second.
 - iii. Cycle: Repeats every 1.5 seconds

- g. Operating Temperature: -67 °F to 158°F.
 - h. Voltage: 24V DC.
 - i. Label: None.
 - j. Finish: Color epoxy coated to match Owner's selected color sample.
 - k. Lens Color: Amber.
3. Sounder
- a. Basis of Design: Cooper Industries DB7 "Uncertified" or approved equivalent.
 - b. Materials
 - i. Glass-reinforced polyester housing.
 - c. Stainless steel cover screws.
 - d. Sound Output
 - i. Up to 110dB(A) output.
 - e. 27 tones, user selectable.
 - f. Operating Temperature: -67 °F to 158°F.
 - g. Voltage: 24V DC.
 - h. Label: None.
 - i. Finish: Color epoxy coated to match Owner's selected color sample.
4. Power Supply: Provide low voltage power supply/supplies as required. If power supply/supplies cannot be housed within the Pedestrian Alert System devices or within the cabinet of the activating gate, provide an additional enclosure suitable for exterior conditions.
5. Fabrication Requirements: All components must be durable, vandal resistant, and weather resistant in accordance with the environmental conditions indigenous to the area in which it is installed.

2.5 COMPONENTS

A. Freestanding Device Housings (Pedestals)

- 1. General: Pre-engineered "gooseneck" pedestal for single device housing, standard 42 inches off vehicle grade (unless shown otherwise in the Drawings) with weatherproof housing sufficiently sized to accommodate required devices.
- 2. Fabrication Requirements
 - a. Weatherproof housing and mounting hardware must be durable, vandal resistant, and weather resistant in accordance with the environmental conditions indigenous to the area in which it is installed.
 - i. Provide a hinged faceplate with an integral lock.
 - ii. Keys: For each key type, furnish two (2) keys for each cabinet. Each cabinet must be uniquely keyed.
 - iii. Manufacturer's standard construction and finishes.

- b. Pedestal
 - i. Heavy-gauge steel with baseplate for bolt-down attachment.
 - ii. Mounting hardware to be hot-dip galvanized. All exposed threads for acorn nuts.
 - iii. Factory Finish: See the Finishes section below.

B. Vehicle Detection Systems

- 1. General: Each vehicle detection system must consist of a digital detector module and one or more inductance loops (sensing loops) working in conjunction to detect the presence of a vehicle as it passes over the loop(s) and generate an electric signal to operate other control equipment.
- 2. Detector Modules
 - a. General: Unless indicated otherwise, vehicle detector modules must be installed within adjacent parking equipment cabinetry serving the same lane (no separate enclosure required). Installation must be shielded to prevent Radio Frequency Interference (RFI), allowing for vehicle detector operation within an electrically noisy environment typically found in parking systems.
 - b. Required Features/Functions
 - i. Compact Plug-In Design
 - ii. Loop Frequency Selection
 - iii. Self-Tuning
 - iv. Selectable Permanent Presence
 - v. Automatic Sensitivity Boost
 - vi. Detection Filter (Small or Fast-Moving Objects)
 - c. Electrical Requirements
 - i. LED Indicators for all Functions
 - ii. Low Voltage Loop Interface
 - iii. Loop Isolation Protection
 - iv. Contacts must be capable of switching 1 Ampere of current 24 VAC, 15 VDC.
 - v. All relay output lines must terminate in a weatherproof terminal block.
- 3. Inductance Loops
 - a. General: Inductance loops must provide a vehicle detection height of 20 inches.
 - b. Loop Wire: 14 gage, XHWN or THWN copper; loop size as required to meet functional requirements listed above.
 - c. Loop Groove Fill: Loop sealant and backer rod, as recommended by the manufacturer, must be compatible with loop wire, substrate, and all substrate sealants/coatings. Contractor to coordinate.

4. Performance Requirements: In addition to Performance requirements indicated in Part I of this Section, the following specific requirements are applicable to vehicle detection systems:
 - a. Systems must be designed to operate in temperature range of -40 to 160 °F.

C. Reader Units

1. General: Reader units must be configured to operate as either Ticket Dispenser/Reader Units (R/TD) or Exit Verifier/Reader Units (R/EV) as required by the Contract Documents.
 - a. At a minimum, all Reader Units must be capable of the following:
 - i. Reader mechanism must be of quality constructed material with rust protective coating on exposed parts.
 - ii. The reader mechanism must be removable as a unit.
 - iii. Provide single slot operation for tickets/cards. The ticket/card slot must be illuminated.
 - iv. Functionality: All readers must:
 - a) Must read all accepted tickets, management cards, and credit cards.
 - b) Erase encoding from all vaulted tickets.
 - c) Print and vault all paid tickets with transaction data including at a minimum month, day, year, time of payment, fee, and calculated rate.
2. Product Options
 - a. Reader Units must have the following:
 - i. Controller(s).
 - ii. Ticket printing and issuing mechanisms.
 - iii. Thermal printer.
 - iv. Program timer for closing barrier gate.
 - v. Vault and magazine interfaces as required by host equipment.
3. Operation, General
 - a. Configuration and Service Interface: Reader Units must be capable of being fully configured and serviced in the field. Units must also be programmable on-line through the FMS.
4. Operation for Ticket Dispenser/Reader Units (R/TD)
 - a. Reader Functionality
 - i. Unit will reject any attempted ticket insertions.
 - ii. Inserting Credit Card into the unit results in the following actions unless, on a location-by-location basis, the proposer persuades the Owner that "credit card in" would be of no practical benefit:

- a) Valid Credit Card: The unit captures and sends card information to the FMS, sends a programmed display message to the Entrance Station, returns the card, and automatically sends a signal to raise the barrier gate.
 - b) Invalid Credit Card: The unit sends a programmed display message to the Entrance Station, rejects the card, and sends an alarm signal to the FMS. Once the credit card is removed, the system resets.
 - iii. For locations where “credit card in” is not required Unit will reject any attempted credit card insertions.
 - b. Ticket Dispenser
 - i. Ticket Dispenser Functionality: Units must provide functionality including, but not limited to, the following:
 - a) Print a unique six-digit identification number on the ticket to be used in the event the ticket encoding cannot be read.
 - b) Be user-definable for applying validation to a ticket and be able to distinguish between concurrent rates and rate structures for specific areas or purposes.
 - c) Detect when a ticket is issued but not taken and void the ticket so that it will be retracted and retained in the internal bin.
 - d) Detect when a ticket is taken but the car does not cross over the closing loop (a back-out ticket) and void the ticket as such so that it will be rejected at a cashiering device.
 - e) Assign, in real-time, a non-resettable sequence number for each successful ticket issuance for audit purposes.
 - f) Be capable of incrementing or decrementing occupancy counters.
 - g) Be capable of disabling the ticket issue function when occupancy counter limits are reached (and enable the ticket issue function when the occupancy drops below the limit).
 - h) Be capable of activating a “lot full” sign when occupancy counter limits are reached (and deactivating the lot full sign when the occupancy drops below the limit).
 - i) Print the time and date on all tickets issued.
 - j) Not permit any duplicated ticket usage.
 - k) Disabling the card reader when occupancy counter limits are reached (and enable the card reader when the occupancy drops below the limit).
 - l) Disabling the ticket dispensing mechanism upon a successful card read.
5. Operation for Exit Verifier/Reader Units (R/EV)
- a. Reader Functionality
 - i. Inserting exit ticket into the unit results in the following actions:

- a) Valid Exit Ticket: Unit captures ticket and automatically sends signal to raise barrier gate.
 - b) Invalid Exit Ticket: Unit rejects ticket.
 - ii. Inserting Credit/Debit Card into the unit results in the following actions:
 - a) Valid Credit/Debit Card: Unit captures and sends card information to the FMS and waits for completed transaction signal. Upon completed transaction signal, offers receipt option, sends programmed display message to the Exit Station, returns card and automatically sends signal to raise barrier gate.
 - b) Invalid Credit/Debit Card: Unit sends programmed display message to the Exit Station, rejects card, and sends alarm signal to the FMS. Once debit/credit card is removed, the system resets.
 - b. Exit Verifier
 - i. Fee Calculation
 - a) Calculate and display amount owed on unpaid or insufficiently paid ticket based on current exit time and system rate schedules.
 - b) Accept the exit grace period programmed via the FMS.
 - ii. Using ticket data stored by the FMS.
- 6. Performance Requirements
 - a. General: In addition to Performance requirements indicated in Part I of this Section, the following specific requirements are applicable to ticket dispenser/card reader units:
 - i. Field programmable with built-in service diagnostics.
 - ii. Provide the unit with all necessary control logic for activation by a Vehicle Detection System.
 - iii. Report generation for events and exception events.
 - b. Mechanical: Units must be of quality constructed material with rust protective coating on exposed parts. Each unit must be field removable, and all electrical connections must be keyed plug. Units must be capable of activation by Vehicle Detection System. The unit must use perforated fanfold tickets. At the moment a ticket is issued, it must be imprinted with the hour, minute, month, and date of issuance.
 - c. Electrical: All components must be replaceable, plug-in, and self-contained.

D. Intercom System

- 1. General
 - a. VoIP Intercoms will be located at patron-interface equipment locations as indicated in the "System Configuration" list in Part 3 of this section.
 - b. Master Intercom Operations: On a location-by-location basis, the proposer must include the following options and shall provide any recommendations for the Owner to select one:

- i. Master Intercom Station
 - a) The master intercom station will be located in the Parking Office.
 - b) Intercom master station located in the Parking Office must include call forwarding to a land phone or cell phone, as well as video option.
- ii. Web Functionality
 - a) The FMS will host (or cooperate with) a virtual master intercom software application.
 - b) Master intercom functionality must include call forwarding to a land phone or cell phone.
- c. Where remote intercoms cannot be integrated into an automatic lane station or similar device, coordinate intercom installation on an Auxiliary Lane Station meeting the requirements of this Section.

E. Access Control Units

1. Proximity Card Reader Units

- a. General: Each Proximity Card Reader Unit must consist of a self-contained, compact reader/controller combination device that is equipped to send activation signals to the PCS/IPCE and related equipment when an authorized card is presented. Include the following features:
 - i. Operation Modes: On-line communication to FMS with automatic switch to standalone mode if communications are interrupted. Provide an off-line transaction buffer for 1000 transactions minimum.
 - ii. Real-time clock synchronization with FMS with programmable daylight savings time adjustment.
 - iii. Field programmable with built-in service diagnostics.
- b. Operation
 - i. Reader/Controller
 - a) Reader: Proximity type for proximity cards; read range of up to 18 inches.
 - b) Reader must buffer a minimum of 255 messages in memory to assure that information will not be lost if the reader is in an off-line mode and not communicating with the FMS.
 - c) Provide one master 24-hour level and 5-time programmable levels for time zones.
 - d) Provide a flash memory for the transaction buffer.
 - e) Void a card or group of cards out of memory.
 - f) Make valid a card or group of cards in memory.
 - g) Provide the following programmable anti-passback features:
 - h) Full anti-passback will not allow a card to be used in the same mode (entry or exit) two times in a row and the gate will not open.

- i) Passive anti-passback will allow a card to be used more than once in the same mode (entry or exit) and occurred and will allow access in or out.
 - j) Sync Mode will automatically operate every time Full or Passive anti-passback is programmed. The Sync Mode will allow all cards to be used one time in an entry or exit operation before the anti-passback mode takes effect.
- ii. Provide all necessary software and hardware to communicate with the FMS.
- iii. Access Control Unit Reporting: Access control unit must provide full reporting functionality for events and exception events including, but not limited to, the following:
 - a) Communication failure.
 - b) Device Malfunction.
- c. Performance Requirements
 - i. In addition to Performance requirements indicated in Part I of this Section, the following specific requirements are applicable to Proximity Card Reader Units.
 - a) Provide unit with all necessary control logic for activation by a Vehicle Detection System.
 - b) Electrical: Primary power must be 115 VAC. Secondary Power must be 24 VAC (24 VDC) or less.

2.6 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations pertaining to the designating and applying of finishes.
- B. Durable Color Finish: Provide Manufacturer's standard baked-enamel or powder coat finish as most appropriate for exposure conditions anticipated.
 - 1. Finish interiors and exteriors of cabinets.
 - 2. Colors to be Manufacturer's standard. Colors to be selected by Owner.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, structural support, sleeves, anchorage, and conditions under which the work of this Section is to be performed before installation, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance and timely completion of the Work.

1. Prior to beginning installation, examine areas to receive parking control equipment. Verify that critical dimensions are correct and that conditions are acceptable.
 2. Verify that anchor bolts and conduit stub-up locations are ready to receive work and are as indicated in the approved Shop Drawings.
- B. Report all deviations from the Contract Documents and/or conditions detrimental to performance of the Work to the Architect in writing.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide templates for anchor bolts and other items encased in concrete or below finished surfaces in sufficient time so as not to delay work.
- B. Illuminated Signage
1. Signs must be free from sharp edges, burrs, and other defects. Sawed edges must be smooth and properly finished.
 2. All exposed sign surfaces must be free of glue, fingerprints, dirt, grease, or any other imperfections upon completion of installation.

3.3 INSTALLATION

- A. General
1. Coordination: Sequence, coordinate, and integrate the various elements of the PCS/IPCE with other building components to facilitate an optimized installation.
 2. Rough-In: Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected. Refer to equipment specifications and produce data for rough-in requirements.
 - a. Anchor Bolts: Furnish anchor bolts and other connectors required for securing equipment to in-place work.
 - b. Detector Loops: Cut 1/4-inch x 1 1/2 inch (max.) deep slots in concrete to the configuration shown on shop drawings. The corners of all rectangular loops must have 45-degree cuts to prevent sharp corners from puncturing loop wire.
 3. Install systems, materials, wiring, and equipment to conform with the manufacturer's instructions and approved Submittal data, including coordination drawings, to the greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer the conflict to the Owner.
 - a. Detector Loops: Install loops in accordance with the manufacturer's instructions. After testing loop wires, seal slots with the manufacturer's recommended sealant.

4. Install materials, and equipment level and plumb, parallel and perpendicular to other building systems and components.
5. All products mounted on concrete must have faying surfaces coated with bituminous mastic to prevent corrosion due to cathodic action or, subject to Architect approval, suitable gasket/gasket washers must be provided.
6. Install equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with a minimum of interference with other installations.

B. Illuminated Signage

1. Provide anchorage devices and fasteners where necessary for securing signs; including threaded fasteners for concrete and masonry inserts, through-bolts, lag bolts, and other connectors as required.
2. Locate sign units and accessories where shown or scheduled, using mounting methods of the type described and in compliance with the manufacturer's instructions, unless otherwise indicated.
3. Install sign units level, plumb and at heights indicated, with sign surfaces free from distortion or other defects of appearance.
4. All metal signs and supports mounted on concrete must have faying surfaces coated to prevent corrosion due to cathodic action or suitable gasket/gasket washers must be provided.
5. Touch up of finish surfaces damaged during installation must be done with materials furnished by manufacturer and used according to direction from manufacturer.

C. Pedestrian Alert Systems

1. Provide anchorage devices and fasteners where necessary for securing components; including threaded fasteners for concrete and masonry inserts, through-bolts, lag bolts, and other connectors as required.
2. Locate components and accessories must be install where shown or scheduled, using manufacturer-approved mounting methods.
3. Install components units must be level, plumb and at heights indicated.
4. All components mounted on concrete must have faying surfaces coated to prevent corrosion due to cathodic action or suitable gasket/gasket washers must be provided.
5. Touch up of finish surfaces damaged during installation must be done with materials furnished by manufacturer and used according to direction from manufacturer.

3.4 TESTING/ACCEPTANCE

- A. All equipment is to be tested for compliance with the manufacturer's performance standard and compliance with the performance requirements specified in this RFP.

- B. In addition, before acceptance of the complete installation, the following performance standards must be met:
 - 1. All mechanical components must be operational without downtime for a period of ten (10) working days.
 - 2. All electronic equipment must be operational without downtime or programming problems for a complete monthly report cycle.
 - 3. For each downtime period of four hours or more on the mechanical equipment one working day will be added to the acceptance cycle.
 - 4. On electrical equipment, each downtime period of eight hours or programming problem that delays the daily report cycle will add two working days to the acceptance cycle.
 - 5. Upon completion of system testing and before beginning the acceptance cycle, submit all Operation and Maintenance Data required under Part 1 of this section.
- C. LPR Accuracy Verification: Comply with Section 11 12 35 testing/acceptance requirements.
- D. Remedial action deemed necessary by the Architect and resulting from non-compliance with the Contract requirements must be addressed as described in Article 1.9 “Corrective Measures” of Section 01 45 00 of these Specifications.

3.5 ADJUSTING OF EQUIPMENT

- A. Adjust all equipment provided this Section so that it operates smoothly, easily and properly. Confirm that locks engage accurately and securely without forcing or binding.
- B. Lubricate hardware and other moving parts as required within the manufacturer’s installation procedures to assure proper operation.

3.6 REPAIR, CLEANING, AND PROTECTION

- A. Repair minor damage to eliminate all evidence of repair.
- B. Clean exposed surfaces using materials and methods recommended by the manufacturer of the material or product being cleaned.
 - 1. Remove excess lubricants and/or adhesives immediately.
 - 2. Immediately upon completion of work, clean all exposed surfaces, remove excess materials and equipment, and repair any damage to other work.
 - 3. Re-clean all exposed surfaces one day prior to the Date of Substantial Completion.
 - 4. Remove and replace work that cannot be successfully repaired or cleaned to the satisfaction of the Architect.
- C. Provide temporary protection and maintain conditions, in a manner acceptable to the manufacturer and installer to ensure work is being done without damage or deterioration

at the time of final acceptance. Remove protections and re-clean as necessary immediately before final acceptance.

1. Remove barrier-gate arms during the construction period to prevent damage, and install them immediately before Substantial Completion.

3.7 INSTRUCTION AND SERVICE TRAINING

- A. Operational training classes for all levels of Owner personnel including attendants, cashiers, shift supervisors, managers, administrators, and PARCS equipment service personnel must be provided as part of the Work. The manufacturer must also provide technical training classes for servicing the equipment at the facility where the equipment is manufactured or the manufacturer's nearest service location. The Owner will select two service personnel to attend the classes for a two to three-week period.
- B. Training must include, but not be limited to the following:
 1. PARCS equipment installation, start-up, operations, adjustments, replacement of parts and consumables, and basis troubleshooting
 2. Programming rates, access control, generation of standard and user-defined reports, performance analytics, processing validations,
 3. Monitoring garage facilities and systems etc.
- C. Proposer must provide planned training program for Authority staff, including agenda topics, time allotment, and training manuals.
- D. Training session should be video-recorded and provided to the Authority.
- E. At the conclusion of the training, all trainees shall be a test on training session presentation.

3.8 MAINTENANCE RECORDS

- A. Servicing Contractor(s) must maintain accurate and up-to-date records of service calls, preventive maintenance operations and equipment failures for each component and sub-system. Records in the form of a log are to become the property of the Owner at the end of the warranty period.
- B. The Supplier must submit a list of spare parts for review. The Owner will approve spare parts list.

3.9 SCHEDULES

- A. General: Provide and deploy the following PARCS equipment and devices in accordance with the PARCS Equipment Deployment Matrix. Refer to the Description of Services Requested.
- B. Parking Control Equipment Lane Equipment for

1. Entry (Standard) Lanes:
 - a. Entrance Lane Equipment and Devices
 - 1) Barrier Gate Unit with straight/articulated gate arm
 - 2) Digital Self-Tuning Vehicle Detector
 - 3) Detector Loops
 - 4) Entry Station
 - a) Ticket Dispenser
 - b) Optical Bar Code/QR Code Scanner
 - c) Proximity Card Reader
 - d) High Def. Camera
 - e) Display Screen
 - f) Push-to-Talk Intercom
 - g) NF Credit/Debit Card Reader
 - 5) Full Sign
2. Entry (Redundant) Lanes
 - a. Entrance Lane Equipment and Devices
 - 1) Barrier Gate Unit with straight/articulated gate arm
 - 2) Digital Self-Tuning Vehicle Detector
 - 3) Detector Loops
 - 4) Entry Station
 - a) Ticket Dispenser
 - b) Optical Bar Code/QR Code Scanner
 - c) Proximity Card Reader
 - d) High Def. Camera
 - e) Display Screen
 - f) Push-to-Talk Intercom
 - g) NF Credit/Debit Card Reader
3. Entry (Reserved) Lanes (to Nested Basement Parking Areas)
 - a. Entrance Lanes Equipment and Devices
 - 1) Barrier Gates Units with straight/articulated gate arm
 - 2) Digital Self-Tuning Vehicle Detectors
 - 3) Detector Loops
 - 4) Proximity Card Reader with Push-to-Talk Intercom and Pedestal
4. Entry Lanes (with Attendant Cashier Booths at Fort Duquesne & Sixth Garage)
 - a. Attendant Booth Equipment and Devices
 - 1) Fee Computer
 - 2) Portable Receipt Printer
 - 3) Fee Display Unit

5. Reversible (Standard) Lanes:
 - a. Entry (Mode) Lane Equipment and Devices
 - 1) Barrier Gate Unit with straight/articulated gate arm
 - 2) Digital Self-Tuning Vehicle Detector
 - 3) Detector Loops
 - 4) Entry Station
 - a) Ticket Dispenser
 - b) Optical Bar Code/QR Code Scanner
 - c) Proximity Card Reader
 - d) High Def. Camera
 - e) Display Screen
 - f) Push-to-Talk Intercom
 - g) NF Credit/Debit Card Reader
 - 5) Full Sign
 - b. Exit (Mode) Lane Equipment and Device
 - 1) Barrier Gate Unit with straight/articulated gate arm
 - 2) Digital Self-Tuning Vehicle Detector
 - 3) Detector Loops
 - 4) Exit Station (Exit Verifier/Pay Station)
 - a) Optical Bar Code/QR Code Scanner
 - b) Receipt Printer
 - c) Proximity Card Reader
 - d) High Def. Camera
 - e) Display Screen
 - f) Push-to-Talk Intercom
 - g) NF Credit/Debit Card Reader
6. Reversible (Special) Lanes
 - a. Entry/Exit (Mode) Lane Equipment and Device
 - 1) Barrier Gate Units with straight/articulated gate arm
 - 2) Digital Self-Tuning Vehicle Detectors
 - 3) Detector Loops
 - 4) Two (2) Proximity Card Reader with Push-to-Talk Intercom and Pedestal
 - 5) Full Sign (only at Forbes Semple Garage)
7. Exit (Standard) Lanes:
 - a. Exit Lane Equipment and Device
 - 1) Barrier Gate Unit with straight/articulated gate arm
 - 2) Digital Self-Tuning Vehicle Detector
 - 3) Detector Loops

- 4) Exit Station (Exit Verifier/Pay Station)
 - a) Optical Bar Code/QR Code Scanner
 - b) Receipt Printer
 - c) Proximity Card Reader
 - d) High Def. Camera
 - e) Display Screen
 - f) Push-to-Talk Intercom
 - g) NF Credit/Debit Card Reader
- 8. Exit (Redundant) Lanes
 - a. Exit Lane Equipment and Device
 - 1) Barrier Gate Unit with straight/articulated gate arm
 - 2) Digital Self-Tuning Vehicle Detector
 - 3) Detector Loops
 - 4) Exit Station (Exit Verifier/Pay Station)
 - a) Optical Bar Code/QR Code Scanner
 - b) Receipt Printer
 - c) Proximity Card Reader
 - d) High Def. Camera
 - e) Display Screen
 - f) Push-to-Talk Intercom
 - g) NF Credit/Debit Card Reader
- 8. Exit (Reserved) Lanes (form Nested Basement Parking Areas)
 - a. Entrance Lanes Equipment and Devices
 - 1) Barrier Gates Units with straight/articulated gate arm
 - 2) Digital Self-Tuning Vehicle Detectors
 - 3) Detector Loops
 - 4) Proximity Card Reader with Push-to-Talk Intercom and Pedestal
- 9. Garage Elevator Lobby
 - a. Elevator Lobby Equipment (Number of units as specified at each garage)
 - 1) Pay-on-Foot (POF) Credit and Cash Station
 - a) Optical Bar Code/QR Code Scanner
 - b) Receipt Printer
 - c) High Def. Camera
 - d) Display Screen
 - e) Push-to-Talk Intercom
 - f) NF Credit/Debit Card Reader
 - g) Bill Recycler
 - h) Bill Vault

- i) Security Locks & Alarms
 - 2) Pay-on-Foot (POF) Credit/Debit/Wallet Only Station
 - a) Optical Bar Code/QR Code Scanner
 - b) Receipt Printer
 - c) High Def. Camera
 - d) Display Screen
 - e) Push-to-Talk Intercom
 - f) NF Credit/Debit Card Reader
 - g) Security Locks & Alarms
 - 10. Cashier Booth/Window in Garage Elevator Lobby or in Garage Office
 - a. Cashier Station Equipment and Devices
 - 1) Fee Computer or Mobile Cashier on Cellular Device
 - 2) Printer (Stationary or Portable)
 - 3) Intercom Station
 - 4) Ticket Printer
 - 5) Ticket Validator
 - 6) Cashier Drawer
 - 7) Fee Display
 - 11. Garage Office
 - a. Garage Office Equipment and Devices
 - 1) PC Workstation
 - 2) Printer (Stationary)
 - 3) Master Intercom Station
 - 12. Pedestrian Safety Alert System with Exterior Structure Mounting Brackets
 - a. Audio/Video Warning Device (Only for the specifically chosen garages)
- C. Extra Materials: Furnish the following extra materials from the same production run as the materials installed and in the quantities referenced on Appendix A. Package with protective covering for storage and identify with labels describing contents including part name, the serial number and safe storage conditions. Deliver extra materials to Owner.
- 1. IPCE Equipment
 - (1) Spare Articulated Gate Arm Per Barrier Gate specified to have such arm type
 - (2) Spare Straight Gate Arms Per Barrier Gate specified to have such arm type
 - (1) Spare Bill Vault per POF station
 - (2) Spare Bill Recycler Unit
 - (4) Comm/Port Controllers
 - 2. Miscellaneous

- (2) Replacement tubes for Pedestrian Alert System strobe light.
- D. Additional Expendable Items: The Contractor must provide the following additional items as part of the work included in this Section, as requested by Owner:
 - 1. Owner's Operating Stock: Furnish the following operating stock to the Owner prior to initiating system testing. Contractor must obtain Owner approval of stock items prior to obtaining any operating stock.
 - a. Access Cards and Tickets
 - 1) 5000 per garage facility 500 Proximity Cards per garage facility.
 - b. Remote Ticket Validators
 - i. Six (6) remote ticket validators for distribution to local cinema, retail and restaurant establishments including installation and training.

PART 4 - MEASUREMENT AND PAYMENT

4.1 BASIS OF PROPSOAL

- A. Proposals must be based on the scope of Work as shown on the Drawings or as otherwise Scheduled in the Contract Documents.

4.2 UNIT PRICES

- A. General: Unit prices must be provided on the PARCS SYSTEM PRICE & FEE PROPOSAL FORMS as instructed in this RFP document.
- B. Proposers are requested to list unit prices for the following items:
 - 1. Lane Equipment
 - a. Automatic Barrier Gate Unit
 - 1) Articulate Gate Arm
 - 2) Straight Gate Arm
 - b. Replacement Barrier Gate Arm
 - 1) Articulated Gate Arm
 - 2) Straight Gate Arm
 - c. Automatic Entry Station Unit
 - i. Ticket Dispenser
 - ii. Bar Code/QR Code Scanner
 - iii. Credit/debit card functionality only (no cash)
 - iv. Push-to-Call Intercom
 - v. Camera
 - d. Access Control Units
 - i. Proximity Card

- ii. Proximity Card Reader
- e. Automatic Exit Station Unit
 - i. Ticket Verifier
 - ii. Bar Code/QR Code Scanner
 - iii. Credit/debit card functionality only (no cash)
 - iv. Push-to-Call Intercom
 - v. Receipt Printer
 - vi. Camera
- f. LPR Camera System
- 2. Parking Office Equipment
 - a. Controller/Processor Terminals
 - b. Printer Unit
 - c. Mass Ticket Validator
 - d. Master Intercom Station
- 3. Cashier Booths
 - a. Fee Computer or Cellular Cashier for Cloud-Base Platform
 - b. Stationary Printer Unit or Portable Printer Unit
 - c. Fee Display Unit
 - d. Cash Drawer
 - e. Adjustments are acceptable as long as approved by the Authority.
- 4. Cashier Window
 - a. Fee Computer or Cellular Cashier for Cloud Based Platform
 - b. Printer Unit
 - c. Fee Display Unit
 - d. Ticket Validator
 - e. Receipt Printer
 - f. Ticket Scanner
 - g. Cash Drawer
- 5. Automatic Pay-On-Foot Stations
 - a. Credit/debit card functionality only (no cash)
 - b. Credit/debit card plus cash functionality
- 6. Full Sign (Entry Lane Deployment)
- 7. Pedestrian Alert System
- 8. Illuminated Lane Controller Sign
- 9. Variable Message (Rate) Display Signs
- 10. Remote Ticket Validator

END OF SECTION 11 12 15

SECTION 11 12 35

AUTOMATIC LICENSE PLATE RECOGNITION SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. The extent of work included in this Section is specified as follows:

1. Automatic License Plate Recognition System: Designing, furnishing, fabricating, and installation of a fully-functioning and fully-integrated on-line, real-time Automatic License Plate Recognition System (here-in-after referred to as “ALPRS” or “System”) complying with the Design Intent expressed in the Contract Documents, and as required by Project conditions. System must include, but not be limited to, the following:
 - a. Parking Control System
 - 1) The ALPRS must function in tandem with a separate Parking Control System (as per Section 11 12 11) either through integration within the Parking Control System or separately through an electronic interface with the Parking Control System.
 - b. Lane Monitoring
 - 1) Unless noted otherwise, each parking entry and exit lane in the facility must have ALPRS functionality.
 - 2) Using a dual (front and rear) camera configuration, the System must be capable of recognizing and recording license plate numbers for the following vehicles:
 - a) Passenger vehicles in stopped position.
 - b) Passenger vehicles moving in direction of travel
 - c) Front and Rear simultaneous capture requires that two cameras provide a singular output to the access control system or log.
 - 3) System must be capable of recognizing and recording license plate numbers as defined this Section.
 - c. In-Lane Cameras for use in image capturing as described herein.
2. System Configuration
 - a. ALPRS must be hosted within the specified operating system for the Parking Control Equipment. See Section 11 12 11 for additional information.
3. ALPRS Design: In compliance with the Contract Documents, design a fully-functioning System that provides the following:
 - a. Reads and records the license plate numbers of each vehicle passing through the ALPRS-enabled access control points of the facility.

- B. *Please note that within the Air Rights Garage there is a nested area consisting of levels 4, 6 and 8 reserved for Hospital patients. When a ticket is pulled at the entrance (or other access granted) that license plate will be used as a credential for the nested area as appropriate. This area must be segregated and a count must be provided for each level independently. When any level is fully occupied the “Full” sign would be illuminated and drivers would be guided to the available spaces.*

1.2 DEFINITIONS

- A. Application Programming Interface (API): A software interface that defines a shared boundary across which two or more software programs can exchange electronic data or Turnkey Solution for facility management (FMS) with an access control tracking system solution to provide desired data output and visibility for user (as supplied by manufacturer of ALPRS).
- B. Design Intent: The general intended design objectives of the Contract Documents as prepared and interpreted by the responsible architectural/engineering design professional for a particular scope of the Work. Notwithstanding any other requirements prescribed by the Contract Documents or interpretations aforementioned, the Specifications and the Drawings are complementary, and together are intended to represent the results that will accomplish the Architect or responsible engineer’s design intent for the Work.
- C. Facility Management System (FMS): See Section 11 12 11.
- D. Patron: See Section 11 12 15.
- E. Parking Administrator (“Administrator”): The Owner or a System operator with Owner-specified permissions to access System programming for the purposes of configuring or troubleshooting the System.
- F. Parking Operator (“Operator”): A System user with Owner- or administrator-specified permissions to access certain System menus, utilize certain System functions, and/or have access to certain System databases.
- G. System User (“User”): An Owner-authorized individual who can log into the System using assigned and re-definable username, password and permissions.
- H. Web-Access Portal: A System user interface accessed via a compatible Web-enabled device.
- I. Web-Based System (“Web-based”): A System in which the standard user interface is through a Web-Access Portal.
- J. List of Abbreviations:
1. API: Application Programming Interface
 2. FMS: Facility Management System
 3. GUI: Graphical User Interface

4. LPN: License Plate Number
5. LPR: License Plate Recognition

1.3 SYSTEM DESCRIPTION

- A. General: The ALPRS will be used to accommodate parking patrons and control the Parking Control Equipment as described in Section 11 12 15.
- B. ALPRS Design
 1. The ALPRS must operate in on-line and off-line mode.
 2. The ALPRS must comply with ANSI and ISO standards.
 3. All software must be configurable in the field by qualified personnel.
 4. All time-dependent functions must utilize real-time clock synchronization with a single central system clock.
 5. Protect against interference or damage by lightning or other electrical influence; include fuse, over-voltage protection, flash-over protection, and line filter.
 6. The ALPRS must be state-of-the-art.
 7. The ALPR camera must have an onboard database for whitelisting and buffering capability.
 8. The LPR must meet all NDAA and TAA compliance standards.
 9. The camera must have a configurable range distance of 10-82ft which is accessible on the web-based UI.
- C. System Functionality
 1. General: System must:
 - a. Use cameras to read and capture (record) license plate numbers into a System database for use as a parking operations credential.
 - b. Monitor and report on space availability, durations of stay, facility occupancy patterns, etc.
 - c. Provide Web-based interface and management capabilities on a real-time basis. See Part 2 for connections required by the Owner for access to the System.
 - d. Be capable of integration into third party systems via Wiegand and TCP/IP
 - e. Utilize both Infrared (IR) and Color (white light) cameras
 2. Security: All administrative access to the ALPRS must be controlled by authorized user ID and password.
 3. Functional Performance
 - a. Ambient lighting conditions (day or night) must have no effect on the accuracy of the ALPRS.
 - b. The ALPRS must not adversely affect the functioning of any Parking Control Equipment.

- c. The ALPRS must not increase the vehicle processing time for any Parking Control Equipment.
 - d. Deactivation of the ALPRS must not disable any other Parking Control Equipment functionality.
 - e. Activation/Deactivation of ALPRS functionality must be controlled directly by authorized user or be able to be set to automatically activate upon system boot.
4. System Activation Records: Once the in-lane equipment is activated, patron interactions with the ALPRS must be recorded as one of the following events:
- a. Entry Events: One of the following:
 - 1) Process where a ticket issued at entry is associated with a concurrent LPN read/capture.
 - 2) LPN read/capture at entry is accepted as a “ticketless” credential.
 - b. Exit Events: One of the following:
 - 1) Process where the ticket associated with the current LPN read/capture matches the correlation made upon entry and remains valid for the purposes of determining parking fee and/or approval as a “ticketless” credential to exit.
 - 2) LPN accepted at entry as a “ticketless” credential remains valid for the purposes of determining parking fee and/or approval as a “ticketless” credential to exit.
 - c. Exception Events: For events not conforming to any of those listed above, one of the following:
 - 1) Mismatched Ticket: An exit event where the ticket associated with the LPN does not match the correlation made upon entry.
 - 2) Blocked LPN: Upon a successful LPN read, the LPN must not be accepted as a valid credential if it resides on the Blocked LPN List and the exception must be linked in the ALPRS Database with the associated entry or exit event.
 - 3) License Plate Not Found: If the ALPRS cannot identify a license plate when a vehicle is in view of LPR Camera, the exception must be linked in the ALPRS Database with the associated entry or exit transaction.
 - 4) No Plate Match: An exit event where the LPN does not exist in the ALPRS Database or the LPN was misread at entry.
- D. System Database: The ALPRS Database must be the primary database to process facility access/exits and exception transactions via the ALPRS. Exit transactions must be given highest priority for database review.
- 1. Security: ALPRS Database management must be controlled as a separate administrative (higher level) permission by authorized user ID and password. The database management should be feasible to edit and adjust remotely.

2. Features: ALPRS Database access must include, but is not limited to, the following features:
 - a. LPN Profile Storage: Provide for the following to be stored in database for each LPN:
 - 1) Status as “valid” or “blocked” for use as a ALPRS credential.
 - 2) Vehicle entry date/time.
 - 3) Vehicle exit date/time.
 - 4) Fields as applicable to the patron type associated with the LPN (i.e. transient parker, permit parker, etc.).
 - 5) Images captured by LPR camera with date/time stamp.
 - 6) Comment Field.
 - 7) Editing history log for each LPN by authorized user ID.
 - b. Transaction Storage: Provide for the following to be stored in database for each type of transaction:
 - 1) Transaction by type (including types of exception transactions).
 - 2) Transaction date/time.
 - 3) Fields as applicable to the patron type associated with the transaction (i.e. transient parker, permit parker, etc.).
 - 4) Images captured by LPR camera with date/time stamp.
 - 5) Comment Field.
 - 6) Editing history log for each LPN by authorized user ID.
 - c. Image Storage
 - 1) Include images of license plate and broader view of vehicle.
 - 2) Database access must include ability to pan and zoom-in on images.
- E. In-Lane Equipment: System must include the following, complete and functional:
 1. Image-capture-type camera(s) capable of capturing a full-color overview and IR overview of the vehicle and a close-up of license plate characters (patch plate image).
 2. Lighting or light-blocking baffles as necessary to provide ALPRS functionality.
- F. LPR Accuracy
 1. The successful capture rate for the System (both LPN and images) must be no less than 99 percent once the permitted exceptions have been excluded from the calculation.
 - a. LPR Exceptions: For the purposes of evaluating ALPRS performance requirements, the following exceptions are applicable:
 - 1) License plate missing from the vehicle or displaying a State-authorized temporary placard.

- 2) License plate outside of the camera's field of view (i.e. oversized vehicles).
- 3) License plate mounted in a manner inconsistent with the law (i.e. displayed in window).
- 4) License plate wholly or partially obstructed or obscured by a foreign object. (bike rack, etc.)
- 5) License plate exhibiting damage as follows:
 - a) Portions of the license plate are missing.
 - b) License plate is bent or otherwise distorted in a manner that alters the shape of characters that constitute State of origin or LPN.
- 6) License plate from outside the United States.
- 7) License plate indistinguishable due to graphics applied to the vehicle, corroded, or paint peeled off.

G. Theory of Operation

1. All ALPRS-Enabled Lanes: See Section 11 12 15.

H. System Storage Capacity

1. The initial System installation must be capable of managing the facility as indicated in the Contract Documents, and processing and storing the associated System records based on 100% turn-over in a 24-hour period.
2. The initial System Storage capacity must be capable of storing on-line a minimum of two (2) years of System data, including any associated image files, based on the above capacity estimates.

1.4 PERFORMANCE REQUIREMENTS

- A. All electrical equipment must be approved by Underwriters Laboratories, Inc. (UL) where such approval is standard in the industry. Where required by Code or as otherwise indicated in the Contract Documents, provide electrical enclosures complying with applicable NEMA standards.
- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.5 SUBMITTALS

- A. General: Comply with Section 11 12 15 requirements.

1.6 QUALITY ASSURANCE

- A. General: The Quality requirements of this Section are intended to be complimentary to the requirements of Division 1. In the event of an apparent conflict, the Architect must be notified in a timely manner.

- B. Source Quality Control: Except where specified otherwise, obtain parking control equipment and accessories from single manufacturer or from manufacturers which are acceptable to the parking control equipment manufacturer. All equipment must be new. Rebuilt, reconditioned or used parts are not acceptable.
- C. Correlation of Performance Requirements: The Work of this Section is subject to the performance requirements indicated in the Contract Documents and as follows:
 - 1. Requirements of Regulatory Agencies: The Work is subject to all applicable provisions of the Codes and Standards required by the authorities having jurisdiction.
 - 2. Accessibility Guidelines: Work of this Section must be in full compliance with all applicable accessibility requirements for buildings capable of accommodating the public as required by the authorities having jurisdiction. See Code Summary on the Drawings for additional information.
 - 3. Reference Standards: Standards referenced in this Section are commonplace in the industry (unless noted otherwise) and are referred to by basic designation only. Standards form a part of this Specification to the extent referenced.
 - 4. Manufacturer's published specifications, installation requirements, and instructions as approved by the Architect.
 - 5. Correlation and Intent of the Contract Documents: In the event of conflicts or discrepancies between the Contract Documents, the requirements of regulatory agencies, and the indicated Reference Standards, the most stringent requirements govern.
- D. Qualifications
 - 1. All qualifications must comply with the requirements for Parking Control Equipment (see Section 11 12 15).
- E. Verified Performance by Manufacturer: For incorporation into the Work, use only products that have been previously tested as follows:
 - 1. Tested Performance: Work must meet or exceed all the specified performance requirements of this Section as tested by an approved testing laboratory.
 - a. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- F. System Performance Responsibility: The engineered and tested performance of the System is the sole responsibility of the System manufacturer. The System installer must comply with the manufacturer's recommendations.

1.7 DELIVERY, STORAGE AND HANDLING

- A. All equipment and components must be delivered to the site packaged to prevent damage and marked for easy identification of each item. Sequence deliveries to avoid delays, but minimize on-site storage.
- B. The equipment and components must be stored in a clean, dry location. Protect from all possible damage. Damaged items must be replaced at no cost to Owner.
- C. Handle equipment and components in strict compliance with manufacturer's instructions and recommendations. Protect from all possible damage. Only remove from storage area item quantities that can be installed in a day's work.

1.8 OPERATING CONDITIONS

- A. Equipment must be designed, fabricated, and installed to operate effectively under the climate and exposure conditions to which the equipment will be exposed. All equipment located within the parking areas is for exterior, exposed-to-weather use.
 - 1. If any System heating or cooling devices do not operate to Owner's satisfaction within the warranty period, they must be repaired and/or replaced by the manufacturer.
- B. It is recognized that certain solid state and computer-type control equipment may require special electrical power and grounding considerations; if so required for this Project, the Contractor must:
 - 1. Include in the bid amount, the cost to provide and install voltage stabilization modules or devices to protect each component from normal voltage variations.
 - 2. Advise the Architect in writing at the time of the award of contract of any special electrical power and grounding requirements.

1.9 COORDINATION AND SCHEDULING

- A. General: Any equipment clearances and dimensions shown on the Drawings are generic and do not relate to any specific product or manufacturer.
 - 1. Coordinate final locations and dimensions with elevator actually furnished.
 - 2. Include coordination of all adjoining and connecting work, and accommodate variations between final dimensions and dimensions shown on the Drawings.
- B. Coordination with Interfacing/Adjoining Work: Contractor to coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure and fully-functional; include timely distribution of coordination-related data as required to prevent delaying the Work: At a minimum, include the following:
 - 1. Templates and Diagrams: Obtain setting drawings, templates, diagrams, and other data from System manufacturer and furnish to fabricators and installers of related work.

2. Sleeves and Penetrations: Where the work of this Section requires sleeves and/or penetrations through the work of other Sections, obtain specific requirements from System manufacturer and furnish to fabricators and installers of related work.
 - a. Coordinate extent of any slab-on-grade block-outs required for the Work.
3. Accessibility and Locations: Coordinate locations of System components and accessories with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of the work of this Section. Notify Architect if proposed locations will vary from Design Intent.
4. Utility Connections: Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.
 - a. Electrical Interfaces: Supplier of the parking control equipment must provide an experienced field representative to meet with the installer and the Electrical Subcontractor, before any rough-in work begins, to review building plans as they relate to the IPCE and must do the following:
 - 1) Explain details or precautions necessary to assure that all System control equipment, and in particular, the detector loops will work properly.
 - 2) Determine that all required conduits and wiring are properly laid out.
 - 3) Coordinate with Contractor to determine appropriate depths for detector loop installation and, based on the structural system, ensure depth does not affect the slab reinforcing steel.
 - b. System Communications: Coordinate interfaces with any other systems by others, including but not limited to Local Area Network, etc.
5. Comply additionally with the "Quality Control Submittal" requirements of this Section.

1.10 LICENSING

- A. All required operating system and application software licenses must be supplied in sufficient quantities to accommodate the number of users and all of the equipment per the requirements of this Section.
 1. If any required licenses will require the payment of fees over the life expectancy of the System, such fees must be disclosed at time of bidding.

1.11 WARRANTY

- A. General
 1. Warranty requirements specified in this Article shall in no way deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and must be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

- B. Manufacturer's Warranty for ALPRS Work: Manufacturer's standard form warranty for material and workmanship, signed by an authorized representative, in which manufacturer agrees to repair or replace work that exhibits material defects caused by manufacture or design of product and/or due to the workmanship of the installation. Software support provided during warranty period to include all software upgrades at no additional cost to Owner.
1. Durations: All Warranty durations commence on the date of Substantial Completion of the Work provided under this Section (on the date the respective equipment is totally operational and is accepted by the Owner in writing).
 - a. Automatic License Plate Recognition System (ALPRS): Two(2) years.
 - 1) Include, as an option, the cost to extend warranty for a second and third year.
 - b. Integrated System Equipment: Manufacturer's standard duration for each type of equipment but not less than Two(2) years.
 2. The term "defect" is defined, not by way of limitation, to include:
 - a. Non-compliance of materials, products, and/or systems with specified properties or performance as indicated this Section, faulty installation, installation of other than Architect-approved materials, and defective materials.
 - b. Operational failures, performance below required minimums, excessive deterioration or aging, abnormal wear considering intensity of use, unsafe conditions, excessive noise or vibration, and similar unusual, unexpected and unsatisfactory conditions; but does not include defects caused by alterations, abusive use, vandalism, failure of power supply, improper maintenance and similar causes beyond the control of the Contractor.
 3. Software Support During the Warranty Period
 - a. Make available to the Owner normal software improvement releases (updates) as they become available at no additional cost to the Owner.
 - b. Provide all software patches and updates free of charge during the warranty period; however, the Owner has right of refusal.
 - c. Seven (7) calendar days prior to all software modifications, patches, updates, and upgrades, provide accurate and complete documentation that describes:
 - 1) Patch/update release designation.
 - 2) Proposed date and time of implementation.
 - 3) Detailed description of what the patch/update accomplishes.
 - 4) Test plan that shows the change has been successfully tested and has passed internal unit, end-to-end testing.
 - 5) Full "Disaster Recovery" procedures that return the system to its pre-patch/update condition.
 - d. Provide operating system support and database administration services including adherence to the recommended operating system patches and

updates as they are made commercially available by the operating system developer.

- e. Coordinate the testing and implementation of all patches and updates with the Owner.
- f. Support upgrades to the application based on operating system patch and upgrade requirements.
- g. If at any time the Contractor ceases to do business or ceases to make the software product commercially available, the Owner will assume full ownership of the software. Thirty (30) days prior to ceasing to do business, the Contractor must provide the most current version of the software source code to the Owner.
- h. Provide corrective patches and upgrades in the event security vulnerability or system availability issues are discovered.

1.12 MAINTENANCE AND SERVICE

A. General Requirements:

- 1. ALPRS Maintenance must be inclusive of both preventative maintenance and remedial maintenance for all ALPRS equipment and systems, inclusive of all hardware and software in accordance with the requirements of this Section.
 - a. ALPRS must be maintained to perform to the ALPRS design specifications as approved by the Architect and Owner during ALPRS Design.
- 2. ALPRS Service (remedial maintenance) must include all repairs, adjustments, and/or replacement of any or all System components as necessary to ensure continuous operation of the entire ALPRS.

- B. ALPRS Maintenance Plan and Operations Contract: ALPRS maintenance and service must comply with the requirements for Parking Control Equipment (see Section 11 12 15).

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products and Basis-of-Design: All products must be state-of-the-art in meeting System requirements. Subject to compliance with project requirements, manufacturer's offering products which may be incorporated in the Work include the following:
 - 1. Manufacturer of the Parking Control Equipment or a manufacturer approved by same (see Section 11 12 15).

2.2 MATERIALS

- A. General: Utilize materials indicated below in the manufacture and installation of the ALPRS. The use of alternative materials is subject to Architect approval. All proposed alternative materials must be clearly identified in the Submittals for this Section.
- B. Generic Products
 - 1. Aluminum: Alloy and temper recommended by aluminum producer/manufacturer for type of use and as compatible with specified finish, and as follows:
 - a. Sheet: ASTM B 209
 - b. Extruded Shapes: ASTM B 221
 - 2. Iron and Steel Hardware: ASTM A153 (hot-dip galvanized), includes anchor bolts.
 - 3. Stainless Steel: ASTM A240, Type 304.
 - 4. Bituminous Mastic: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat per ASTM D1187. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.3 SYSTEM CONFIGURATION

- A. General: The ALPRS software is intended to work as a subsystem within or as otherwise interfaced with the Facility Management System (FMS) system provided per Section 11 12 11 – Parking Control Systems. The ALPRS must also include any interconnected (networked) system equipment required to maintain ALPRS operations as specified this Section.
- B. System Programming: System must be completely PC programmable. Programming to all System equipment must be capable of being performed remotely through the FMS software. All programming and/or reprogramming operations must be logged by the System. All System programming must be via user ID log-in and restricted by state-of-the-art password protection.
- C. Facility Management System (FMS)
 - 1. General: The ALPRS must consist of one Lane Command Unit per ALPRS-enabled lane, peripherals and software. Each Lane Command Unit must communicate directly to the FMS (provided per Section 11 12 11) via an approved API in order to accommodate shared database functionality, status reports, and transmission of data from the ALPRS-related in-lane equipment for activity reporting, access control, and equipment programming.
- D. System Communication
 - 1. Integrated ALPRS/FMS Systems
 - a. User Interfaces: All User-ALPRS interaction must be by means of a series of graphical (GUI) menus that meet or exceed functionality requirements in

Part I of this Section. Comply additionally with GUI requirements of Section 11 12 11.

- 1) API type and configuration must comply with the System Communication requirements of Section 11 12 11.
- b. Equipment Intercommunication: Comply with the System Communication requirements of Section 11 12 11.

2.4 EQUIPMENT

A. General

1. The following equipment list consists of basic System components. Auxiliary items required for the proper functioning of the System, whether mentioned or not, must include but not be limited to: heaters, coolers, wiring, transformers, relays, pedestals, etc. It is the manufacturer's responsibility to provide every component necessary for a complete functional System.
 - a. See Parking Control Equipment Configuration Schedule in Section 11 12 15 Part 3 of this Section for scheduled quantities of the basic ALPRS components for various locations within the facility.
2. Equipment must be located as shown on the Drawings or per Architect-approved Shop Drawings. Adjustments may be necessary due to field conditions and may be permitted following consultation with the Architect.

B. Lane Command Units

1. General
 - a. Software: Design and configure software to meet or exceed the performance requirements of this Section while providing the functionality requirements indicated in the SYSTEM CONFIGURATION requirements above. Multiple software packages may be utilized to achieve System functionality. All software must utilize Graphical User Interface (GUI) technology and must accommodate password-protected access.
 - b. Performance: All system power, components and communications must be sized/rated to meet or exceed the performance requirements of this Section without the slowing the system response times or causing delays at the user interfaces.
 - c. Physical Security: Housings for units must be tamperproof and lockable. Each housing must be uniquely keyed. Furnish two (2) keys for each unit.
2. LPR Cameras
 - a. Dual lens camera (Infrared and Color).
 - b. Auto-focus and motorized zoom with remote control operability.
 - c. Viewing Range: 10 ft. to 82 ft with Auto Focus.
 - d. Front and Rear Plate Recognition.
 - e. Max vehicle speeds up to 40mph.

3. Product Options: Provide all necessary product options to achieve the specified ALPRS functionality including:
 - a. Lighting: IR, LED
 - b. Optional heater unit for cold environment.
 - c. Optional sun visor for units exposed to sunlight.
 4. Operation
 - a. Operation Initiation: Triggered by either hardware or software, or free running, also known as virtual trigger or motion detection.
 - b. Operation status: External color LED indicator.
 5. Performance Requirements: In addition to Performance requirements indicated in Part I of this Section, the following specific requirements are applicable to Lane Command Units:
 - a. Computer: Unit must provide all LPR processing on-board. Provide unit with all necessary control logic for activation by a Vehicle Detection System.
 - b. Ingress Protection Rating: IP-65 min. IP66
 - c. Electrical
 - 1) All components must be replaceable, plug-in and self-contained.
 - 2) Primary power must be PoE+. Secondary Power must be 24 VAC (24 VDC) or less.
 - 3) Provide surge protection for data lines.
 - d. Connectivity
 - 1) Communication ports
 - a) Ethernet 10/100 Mbps.
 - b) LAN (weatherproof standard RJ45).
 - c) Wiegand output interface 26/37 bits.
 - d) TCP/IP output interface.
 - e) Wi-Fi setup capability.
 - 2) Inputs / Outputs: 1 inputs / 2 output
 - 3) Connectors: Waterproof 'plug and play' circular connectors.
 6. Mounting: Bollard Unit, unless noted otherwise.
 7. Materials and Finishes
 - a. Provide manufacturer's standard durable aluminum and/or stainless-steel construction.
 - b. Provide manufacturer's standard finishes/colors.
- C. Remote LPR Cameras
1. General
 - a. Remote LPR Cameras must communicate with the in-lane Lane Command Unit for System operations.

- b. Other than the On-board LPR processing requirement, Remote LPR Cameras must comply with Lane Command Unit requirements.

2.5 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations pertaining to the designating and applying of finishes.
- B. Durable Color Finish: Provide Manufacturer's standard baked-enamel or powder coat finish as most appropriate for exposure conditions anticipated.
 - 1. Finish interiors and exteriors of cabinets.
 - 2. Colors to be Manufacturer's standard.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, structural support, sleeves, anchorage, and conditions under which the work of this Section is to be performed before installation, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance and timely completion of the Work.
 - 1. Prior to beginning installation, examine areas to receive ALPRS equipment. Verify that critical dimensions are correct and that conditions are acceptable.
 - 2. Verify that anchor bolts and conduit stub-up locations are ready to receive work and are as indicated in the approved Shop Drawings.
- B. Report all deviations from the Contract Documents and/or conditions detrimental to performance of the Work to the Architect in writing.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide templates for anchor bolts and other items encased in concrete or below finished surfaces in sufficient time so as not to delay work.

3.3 INSTALLATION

- A. General
 - 1. Coordination: Sequence, coordinate and integrate the various elements of the ALPRS with other building components to facilitate an optimized installation.
 - 2. Rough-In: Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected. Refer to equipment specifications and to product data for rough-in requirements.

- a. Anchor Bolts: Furnish anchor bolts and other connectors required for securing equipment to in-place work.
3. Install systems, materials, wiring and equipment to conform with manufacturer's instructions and approved Submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Architect.
4. Install materials, and equipment level and plumb, parallel and perpendicular to other building systems and components or as necessary to accommodate alignments as otherwise required by the ALPRS.
5. All products mounted on concrete must have faying surfaces coated with bituminous mastic to prevent corrosion due to cathodic action or, subject to Architect approval, suitable gasket/gasket washers must be provided.
6. Install equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.

3.4 TESTING/ACCEPTANCE

- A. General: Comply with testing Testing/Acceptance requirements of Section 11 12 15.
- B. LPR Accuracy Verification
 1. Provide a means to remotely score the ALPRS to ensure it meets the specified LPN Matching Accuracy.
 - a. All software needed to test the LPN Matching Accuracy must be provided by the Contractor.
 - b. All scoring means must be approved by the Owner.
 2. For the complete monthly report cycle specified, provide a report showing that LPR-related System accuracy complies with the Contract Documents.
 3. Upon request of the Owner or Architect, provide:
 - a. Images and associated LPN reads/captures from each lane by means of an acceptable storage format or through remote access.
 - b. Software access to view and score system accuracy based on images selected by Owner or Architect.

3.5 ADJUSTING OF EQUIPMENT

- A. Adjust all equipment provided this Section so that it operates smoothly, easily and properly. Confirm that locks engage accurately and securely without forcing or binding.

3.6 REPAIR, CLEANING AND PROTECTION

- A. Repair minor damage to eliminate all evidence of repair.

- B. Clean exposed surfaces using materials and methods recommended by manufacturer of material or product being cleaned.
 - 1. Immediately upon completion of work, clean all exposed surfaces, remove excess materials and equipment, and repair any damage to other work.
 - 2. Re-clean all exposed surfaces one day prior to Date of Substantial Completion.
 - 3. Remove and replace work that cannot be successfully repaired or cleaned to the satisfaction of the Architect.
- C. Provide temporary protection and maintain conditions, in a manner acceptable to manufacturer and installer to ensure work being without damage or deterioration at time of final acceptance. Remove protections and re-clean as necessary immediately before final acceptance.

3.7 INSTRUCTION AND SERVICE TRAINING

- A. Contractor's instruction and service training must comply with the requirements for Parking Control Equipment (see Section 11 12 15).

3.8 MAINTENANCE RECORDS

- A. Contractor must provide maintenance records in compliance with the requirements for Parking Control Equipment (see Section 11 12 15).

END OF SECTION 11 12 35

